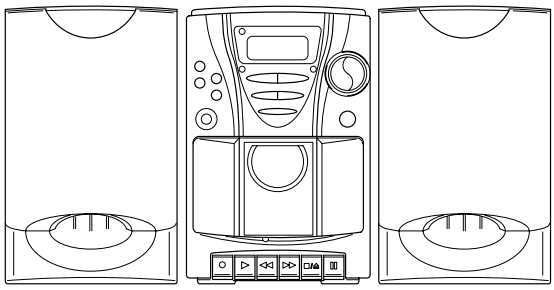
aiwa
SERVICE

LCX-K117 HRJ(S)

HEJ(S)



SERVICE MANUAL

COMPACT DISC STEREO SYSTEM

BASIC TAPE MECHANISM : ZZM-1AR3NC
BASIC CD MECHANISM : DA11T3C

aiwa

S/M Code No. 09-00B-352-1N1

DATA

TABLE OF CONTENTS

SPECIFICATIONS 3
ACCESSORIES/PACKAGE LIST 3
PROTECTION OF EYES FROM LASER BEAM DURING SERVICING 4
Precaution to replace Optical block 4
ELECTRICAL MAIN PARTS LIST 5-8
TRANSISTOR ILLUSTRATION 9
WIRING-1 (MAIN 2B) 10
WIRING-2 (DECK) 11
SCHEMATIC DIAGRAM-1 (MAIN 2B 1/2, DECK) 12
SCHEMATIC DIAGRAM-2 (MAIN 2B 2/2) 13
WIRING-3 (VCD, FR <COMPONENT>) 14
WIRING-4 (VCD, FR <CONDUCTOR>, LED) 15
SCHEMATIC DIAGRAM-3 (VCD 1/2) 16
SCHEMATIC DIAGRAM-4 (VCD 2/2) 17
SCHEMATIC DIAGRAM-5 (FR, LED) 18
WIRING-5 (PT) 19
SCHEMATIC DIAGRAM-6 (PT) 20
WIRING-6 (MOTOR C.B) 21
ELECTRICAL ADJUSTMENT 22, 23
FL GRID ASSIGNMENT/ANODE CONNECTION 24
VOLTAGE CHART 25-28
IC BLOCK DIAGRAM 29, 30
IC DESCRIPTION 31-45
MECHANICAL EXPLODED VIEW 1/1 46
MECHANICAL PARTS LIST 1/1 47
TAPE MECHANISM EXPLODED VIEW 1/1 48
TAPE MECHANISM PARTS LIST 1/1 49
CD MECHANISM EXPLODED VIEW 1/1 50
CD MECHANISM PARTS LIST 1/1 50
SPEAKER PARTS LIST 1/1 51

SPECIFICATIONS

Tuner

FM

Tuning range	87.5 - 108.0 MHz
Usable sensitivity (IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

AM

Tuning range	531/530 - 1,602/1,710 kHz (9/10 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

Tape deck

Track format	4 tracks, 2 channels
Frequency response	Normal tape: 50 - 12,500 Hz (EIAJ)
Recording system	AC bias
Erasing system	Magnet erase
Heads	Recording/playback head (1) Erasure head (1)

CD player

Wow and flutter	Unmeasurable
Scanning method	Non-contact optical scanner (semiconductor laser)
Video data	MPEG 1
Audio data	MPEG 1, Layer 2

Amplifier

Power output	1.9 W + 1.9 W (7 ohms, T.H.D. 1%, 1 kHz) 2.5 W + 2.5 W (7 ohms, T.H.D. 10%, 1 kHz)
Input	AUX (400 mV)
Output	SPEAKERS: 7 ohms or more PHONES: Stereo mini-jack VIDEO OUT: 1.0 Vp-p (75 ohms)

General (Main unit)

Power requirements	110 - 120/220 - 240 V AC, switchable, 50/60 Hz
Power consumption	20 W
Dimensions (W x H x D)	146 x 216 x 206 mm
Weight	2.3 kg

Speaker

Speakers	100 mm cone type, 7 ohms
Dimensions (W x H x D)	130 x 214 x 191 mm
Weight	0.85 kg

- Design and specifications are subject to change without notice.

ACCESSORIES/PACKAGE LIST

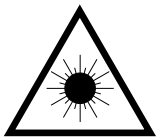
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CGD-901-010		IB,H(ECA)FM<HRJS>
1	8A-CGD-921-010		IB,H(ET)T-KIT<HEJS>
2	8A-CGD-950-010		RC UNIT,RC-AAT00
3	87-A90-030-010		ANT,LOOP AM-NC C
4	87-043-115-010		ANT,FEEDER FM
⚠ 5	87-A91-017-010		PLUG,CONVERSION JT-0476
6	87-050-103-010		CORD,PIN 1PY1.5M

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

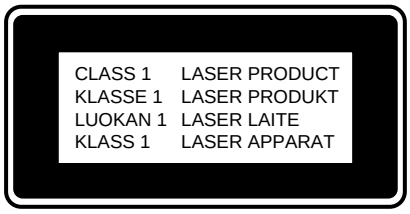
ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

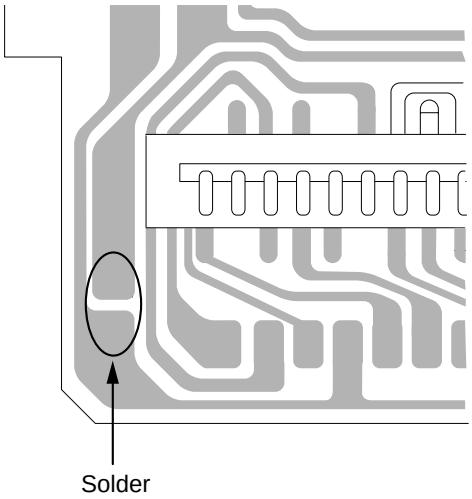


Precaution to replace Optical block (SF-P101NR)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.

PICK-UP Assy P.C.B



ELECTRICAL MAIN PARTS LIST

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-547-010		C-IC,CXA1992AR
	87-A20-919-040		C-IC,BA5915FP
	87-A20-917-010		C-IC,CXD2540Q-1/2
	8A-CGC-606-010		C-IC,UPD78016CFG-578-AB8
	87-A21-064-010		IC,LA4227
	87-A21-443-040		C-IC,M62495AFP
	87-A20-993-040		C-IC,PST9121NL
	87-A20-602-040		C-IC,M5291FP
	87-A20-925-040		C-IC,BA05FP
	87-A20-905-040		C-IC,BA033FP
	87-A20-920-010		C-IC,CL680-D1
	87-A21-431-010		IC,BA4560N
	87-A20-921-040		C-IC,SN74LVU04APW
	87-A20-962-040		C-IC,MSM54V16258B/BSL
	84-ZG1-695-040		C-IC,LH5V2RN1
	87-A20-975-040		C-IC,SN74LV74APW
	87-A20-974-040		C-IC,LC74781M-9017
	8A-CGD-613-010		C-IC,LC867140V-5T17
	87-A20-650-010		IC,RPM6938-V11
	87-A20-918-040		C-IC,SM5878AM
	87-070-127-110		IC,LC72131 D
	87-A20-913-010		IC,LA1837NL
TRANSISTOR			
	87-026-463-080		TR,2SA933S (0.3W)
	87-026-237-080		CHIP-TR,DTC124XK
	89-327-125-080		CHIP TR,2SC2712GR
	87-026-580-080		C-TR,DTA123JK
	87-026-235-080		CHIP-TR,DTC114EK
	87-026-231-080		CHIP-TRANSISTER,DTA124XK
	89-318-154-080		TR,2SC1815 (0.4W)
	89-112-965-080		TR,2SA1296 (0.75W)
	87-A30-117-010		TR,2SA1357
	87-026-291-080		TR,DTC124XS
	89-213-702-010		TR,2SB1370 (1.8W)
	87-026-462-080		TR,2SC1740 S(RS 0.3W)
	87-026-215-080		TR,DTC114YS
	87-026-290-080		TR,DTA124X
	89-111-625-080		TR,2SA1162 (0.15W)
	87-026-464-080		TR,DTC114TS (0.3W)
	87-026-470-080		TR,HN1C03F (0.3W)
	87-A30-072-080		C-TR,RT1P 144C
	89-327-143-080		TR,2SC2714 (0.1W)
DIODE			
	87-020-027-080		CHIP-DIODE 1SS184
	87-017-024-040		C-DIODE,DA204K
	87-020-465-080		DIODE,1SS133 (110MA)
	87-A40-345-080		ZENER,MTZJ10C
	87-A40-180-040		C-DIODE,SB07-015C
	87-020-330-080		DIODE,DAP202K
	87-A40-442-080		ZENER,MTZJ9.1A
	87-017-978-080		DIODE,1N4003
	87-070-345-080		DIODE,IN4148
	87-027-702-080		DIODE,ZENER HZ6C2L (200MA)
	87-017-932-080		ZENER,MTZJ6.2B
	87-017-149-080		ZENER,HZS6A2L
	87-A40-465-010		DIODE,FR202
MAIN 2B C.B			
C211	87-010-401-080		CAP, ELECT 1-50V
C212	87-010-401-080		CAP, ELECT 1-50V
C237	87-010-371-080		CAP, ELECT 470-6.3V
C239	87-010-401-080		CAP, ELECT 1-50V
C240	87-010-401-080		CAP, ELECT 1-50V
C247	87-010-401-080		CAP, ELECT 1-50V
C248	87-010-401-080		CAP, ELECT 1-50V
C257	87-010-401-080		CAP, ELECT 1-50V
C258	87-010-401-080		CAP, ELECT 1-50V
C261	87-010-401-080		CAP, ELECT 1-50V
C262	87-010-401-080		CAP, ELECT 1-50V
C263	87-012-274-080		CHIP CAP,U 1000P-50B
C264	87-012-274-080		CHIP CAP,U 1000P-50B
C265	87-010-263-080		CAP, ELECT 100-10V
C266	87-010-263-080		CAP, ELECT 100-10V
C267	87-010-112-080		CAP, ELECT 100-16V
C268	87-010-112-080		CAP, ELECT 100-16V
C271	87-010-221-080		CAP, ELECT 470-10V
C272	87-010-221-080		CAP, ELECT 470-10V
C279	87-010-385-080		CAP, ELECT 220-25V
C280	87-010-196-080		CHIP CAPACITOR,0.1-25
C281	87-010-196-080		CHIP CAPACITOR,0.1-25
C291	87-012-286-080		CAP, U 0.01-25
C292	87-012-286-080		CAP, U 0.01-25
C293	87-012-286-080		CAP, U 0.01-25
C294	87-012-286-080		CAP, U 0.01-25
C301	87-016-495-000		CAP,E 3300-25 M SMG
C306	87-010-404-080		CAP, ELECT 4.7-50V
C307	87-010-401-080		CAP, ELECT 1-50V
C308	87-010-221-080		CAP, ELECT 470-10V
C310	87-010-248-080		CAP, ELECT 220-10V
C311	87-010-263-080		CAP, ELECT 100-10V
C312	87-010-385-080		CAP, ELECT 220-25V
C331	87-010-401-080		CAP, ELECT 1-50V
C332	87-010-384-080		CAP, ELECT 100-25V
C333	87-A11-148-080		CAP,TC U 0.1-50 Z F
C701	87-010-381-080		CAP, ELECT 330-16V
C703	87-012-286-080		CAP, U 0.01-25
C704	87-012-286-080		CAP, U 0.01-25
C705	87-A10-592-080		C-CAP,S 0.015-50 J B
C706	87-A10-592-080		C-CAP,S 0.015-50 J B
C709	87-012-195-080		C-CAP,U 100P-50CH
C714	87-012-286-080		CAP, U 0.01-25
C717	87-012-286-080		CAP, U 0.01-25
C719	87-012-286-080		CAP, U 0.01-25
C720	87-012-195-080		C-CAP,U 100P-50CH
C721	87-012-176-080		CAP 15P
C722	87-012-176-080		CAP 15P
C723	87-012-274-080		CHIP CAP,U 1000P-50B
C725	87-012-274-080		CHIP CAP,U 1000P-50B
C727	87-010-196-080		CHIP CAPACITOR,0.1-25
C728	87-010-260-080		CAP, ELECT 47-25V
C729	87-012-274-080		CHIP CAP,U 1000P-50B
C731	87-012-286-080		CAP, U 0.01-25
C733	87-010-987-080		C-CAP,S 1500P-50 CH
C734	87-010-987-080		C-CAP,S 1500P-50 CH
C735	87-010-987-080		C-CAP,S 1500P-50 CH
C736	87-010-987-080		C-CAP,S 1500P-50 CH
C737	87-A10-592-080		C-CAP,S 0.015-50 J B
C738	87-A10-592-080		C-CAP,S 0.015-50 J B
C751	87-010-220-080		C-CAP,S 0.018-25 B
C752	87-010-220-080		C-CAP,S 0.018-25 B
C756	87-012-286-080		CAP, U 0.01-25
C757	87-012-188-080		C-CAP,U 47P-50 CH
C758	87-012-167-080		C-CAP,U 5P-50 CH
C763	87-010-829-080		CAP, U 0.047-16
C764	87-012-337-080		C-CAP,U 56P-50 CH
C765	87-012-286-080		CAP, U 0.01-25
C768	87-012-286-080		CAP, U 0.01-25
C769	87-010-260-080		CAP, ELECT 47-25V
C770	87-010-829-080		CAP, U 0.047-16
C771	87-010-383-080		CAP, ELECT 33-25V
C772	87-010-829-080		CAP, U 0.047-16
C773	87-010-196-080		CHIP CAPACITOR,0.1-25
C774	87-010-263-080		CAP, ELECT 100-10V

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C776	87-012-286-080		CAP, U 0.01-25
C777	87-010-400-080		CAP, ELECT 0.47-50V
C778	87-010-401-080		CAP, ELECT 1-50V
C779	87-010-401-080		CAP, ELECT 1-50V
C780	87-010-196-080		CHIP CAPACITOR,0.1-25
C783	87-012-286-080		CAP, U 0.01-25
C784	87-012-286-080		CAP, U 0.01-25
C785	87-010-401-080		CAP, ELECT 1-50V
C786	87-010-401-080		CAP, ELECT 1-50V
C789	87-012-275-080		C-CAP,U 1200P-50 B
C790	87-012-275-080		C-CAP,U 1200P-50 B
C793	87-012-273-080		C-CAP,U 820P-50 B
C794	87-010-406-080		CAP, ELECT 22-50
C795	87-010-596-080		CAP, S 0.047-16
C796	87-010-403-080		CAP, ELECT 3.3-50V
C799	87-010-829-080		CAP, U 0.047-16
C812	87-012-286-080		CAP, U 0.01-25
C820	87-010-260-080		CAP, ELECT 47-25V
C821	87-012-286-080		CAP, U 0.01-25
C822	87-012-286-080		CAP, U 0.01-25
C823	87-012-286-080		CAP, U 0.01-25
C828	87-010-196-080		CHIP CAPACITOR,0.1-25
C829	87-010-196-080		CHIP CAPACITOR,0.1-25
C959	87-010-196-080		CHIP CAPACITOR,0.1-25
C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C961	87-012-174-080		CAP CHIP CERA SS 12P CHJ
C963	87-010-196-080		CHIP CAPACITOR,0.1-25
CF801	87-008-261-010		FILTER, SFE10.7MA5-A
CF802	87-008-261-010		FILTER, SFE10.7MA5-A
CN201	87-099-014-010		CONN,12P 6216 V
CN202	87-099-567-010		CONN,10P TUC-P10P-B1
CN203	87-099-013-010		CONN,11P 6216 V
CN301	87-099-043-010		CONN 2P EH
FFE801	A8-8ZA-193-070		8ZA-1 YFEUNC
J201	87-A60-420-010		JACK,3.5 ST (MSC)
J202	87-A60-659-010		TERMINAL,SPKR 4P HSP-134V-05Z
J203	87-A60-881-010		JACK,PIN 2P MSP 242V05 PBSN
J801	87-A60-702-010		TERMINAL,ANT 4P CJ-9036
L201	87-005-366-010		COIL, 1UH
L202	87-005-366-010		COIL, 1UH
L301	87-003-098-080		COIL,2.2UH
L771	87-A50-266-010		COIL,FM DET-2N(TOK)
L772	87-A91-110-010		FLTR,PCFJZH-450 (TOK)
L981	8Z-ZA1-667-010		COIL,AM PACK 4F(TOK)
X721	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309

VCD C.B

C101	87-012-278-080		C-CAP,U 2200P-50 B
C102	87-010-759-080		C-CAP,U, 0.1-25F
C103	87-010-759-080		C-CAP,U, 0.1-25F
C104	87-010-759-080		C-CAP,U, 0.1-25F
C105	87-010-404-080		CAP, ELECT 4.7-50V
C106	87-010-788-080		C-CAP,U 0.033-2.5F
C107	87-012-286-080		CAP, U 0.01-25
C108	87-010-546-080		CAP, ELECT 0.33-50V
C109	87-010-382-080		CAP, ELECT 22-25V
C110	87-010-785-080		C-CAP,U0.015-25BK
C111	87-010-263-080		CAP, ELECT 100-10V
C112	87-010-197-080		CAP, CHIP 0.01 DM
C113	87-010-788-080		C-CAP,U 0.033-2.5F
C114	87-010-788-080		C-CAP,U 0.033-2.5F
C115	87-010-788-080		C-CAP,U 0.033-2.5F
C116	87-012-269-080		C-CAP,U 390P-50 B
C117	87-012-188-080		C-CAP,U 47P-50 CH
C118	87-010-494-080		CAP ELECT GAS 1/50
C119	87-012-178-080		C-CAP,U 18P-50 CH
C120	87-010-757-080		C-CAP,U 0.047-25 F
C121	87-010-757-080		C-CAP,U 0.047-25 F
C123	87-010-759-080		C-CAP,U, 0.1-25F
C125	87-010-787-080		CAP, U 0.022-25
C126	87-010-759-080		C-CAP,U, 0.1-25F
C127	87-010-112-080		CAP, ELECT 100-16V
C130	87-010-112-080		CAP, ELECT 100-16V
C131	87-010-112-080		CAP, ELECT 100-16V
C132	87-012-274-080		CHIP CAP,U 1000P-50B
C133	87-010-112-080		CAP, ELECT 100-16V
C134	87-010-759-080		C-CAP,U, 0.1-25F
C135	87-010-759-080		C-CAP,U, 0.1-25F
C136	87-010-759-080		C-CAP,U, 0.1-25F
C137	87-010-759-080		C-CAP,U, 0.1-25F
C138	87-012-280-080		CAP, U 3300P-50
C139	87-012-286-080		CAP, U 0.01-25
C140	87-010-236-080		CAP,E 1000-10V SME
C141	87-010-759-080		C-CAP,U, 0.1-25F
C142	87-010-759-080		C-CAP,U, 0.1-25F
C143	87-010-757-080		C-CAP,U 0.047-25 F
C151	87-010-263-080		CAP, ELECT 100-10V
C152	87-010-197-080		CAP, CHIP 0.01 DM
C153	87-A10-893-080		CAP,E 220-10 M PW
C154	87-010-197-080		CAP, CHIP 0.01 DM
C155	87-012-280-080		CAP, U 3300P-50
C156	87-010-992-080		C-CAP,S 0.047-25 B
C157	87-010-992-080		C-CAP,S 0.047-25 B
C158	87-012-199-080		CAP 220P
C159	87-016-526-080		C-CAP,S 0.47-16 BK
C160	87-012-180-080		C-CAP,U 22P-50 CH
C161	87-012-280-080		CAP, U 3300P-50
C162	87-012-274-080		CHIP CAP,U 1000P-50B
C201	87-010-759-080		C-CAP,U, 0.1-25F
C206	87-012-195-080		C-CAP,U 100P-50CH
C207	87-012-195-080		C-CAP,U 100P-50CH
C208	87-012-195-080		C-CAP,U 100P-50CH
C209	87-012-195-080		C-CAP,U 100P-50CH
C210	87-016-669-080		C-CAP,S 0.1-25 K B
C211	87-010-263-080		CAP, ELECT 100-10V
C213	87-010-197-080		CAP, CHIP 0.01 DM
C214	87-010-759-080		C-CAP,U, 0.1-25F
C251	87-010-404-080		CAP, ELECT 4.7-50V
C278	87-010-260-080		CAP, ELECT 47-25V
C301	87-010-237-080		CAP,E 1000-16V
C302	87-012-140-080		CAP 470P
C303	87-012-274-080		CHIP CAP,U 1000P-50B
C304	87-010-387-080		CAP,E 470-25 SME
C305	87-010-385-080		CAP, ELECT 220-25V
C306	87-010-112-080		CAP, ELECT 100-16V
C307	87-010-759-080		C-CAP,U, 0.1-25F
C308	87-010-263-080		CAP, ELECT 100-10V
C309	87-010-759-080		C-CAP,U, 0.1-25F
C310	87-010-263-080		CAP, ELECT 100-10V
C311	87-010-759-080		C-CAP,U, 0.1-25F
C312	87-012-274-080		CHIP CAP,U 1000P-50B
C323	87-010-759-080		C-CAP,U, 0.1-25F
C334	87-010-404-080		CAP, ELECT 4.7-50V
C501	87-010-197-080		CAP, CHIP 0.01 DM
C502	87-010-197-080		CAP, CHIP 0.01 DM
C503	87-010-197-080		CAP, CHIP 0.01 DM
C504	87-012-172-080		CAPACITOR CHIP U 10P CH
C505	87-012-172-080		CAPACITOR CHIP U 10P CH
C506	87-010-197-080		CAP, CHIP 0.01 DM
C508	87-010-263-080		CAP, ELECT 100-10V
C509	87-016-669-080		C-CAP,S 0.1-25 K B
C510	87-010-263-080		CAP, ELECT 100-10V
C511	87-010-759-080		C-CAP,U, 0.1-25F
C512	87-012-286-080		CAP, U 0.01-25
C513	87-012-286-080		CAP, U 0.01-25
C514	87-010-197-080		CAP, CHIP 0.01 DM
C518	87-012-195-080		C-CAP,U 100P-50CH
C519	87-012-145-080		CAP, CHIP S 270P CH
C520	87-012-157-080		C-CAP,S 330P-50 CH

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C521	87-012-197-080		C-CAP,U 150P-50 CH
C522	87-010-371-080		CAP, ELECT 470-6.3V
C523	87-012-286-080		CAP, U 0.01-25
C524	87-010-197-080		CAP, CHIP 0.01 DM
C525	87-010-197-080		CAP, CHIP 0.01 DM
C526	87-010-197-080		CAP, CHIP 0.01 DM
C527	87-010-197-080		CAP, CHIP 0.01 DM
C528	87-010-197-080		CAP, CHIP 0.01 DM
C529	87-010-197-080		CAP, CHIP 0.01 DM
C530	87-010-197-080		CAP, CHIP 0.01 DM
C531	87-010-197-080		CAP, CHIP 0.01 DM
C532	87-010-374-080		CAP, ELECT 47-10V
C533	87-010-197-080		CAP, CHIP 0.01 DM
C534	87-010-112-080		CAP, ELECT 100-16V
C535	87-010-197-080		CAP, CHIP 0.01 DM
C536	87-010-078-080		CAP,E 47-6.3 5L
C537	87-010-197-080		CAP, CHIP 0.01 DM
C538	87-010-759-080		C-CAP,U, 0.1-25F
C539	87-010-759-080		C-CAP,U, 0.1-25F
C540	87-010-078-080		CAP,E 47-6.3 5L
C541	87-010-197-080		CAP, CHIP 0.01 DM
C542	87-012-188-080		C-CAP,U 47P-50 CH
C544	87-010-197-080		CAP, CHIP 0.01 DM
C546	87-010-197-080		CAP, CHIP 0.01 DM
C549	87-010-494-080		CAP ELECT GAS 1/50
C551	87-012-196-080		C-CAP,U 120P-50 CH
C552	87-010-197-080		CAP, CHIP 0.01 DM
C554	87-010-197-080		CAP, CHIP 0.01 DM
C556	87-010-197-080		CAP, CHIP 0.01 DM
C557	87-012-182-080		C-CAP,U 27P-50 CH
C558	87-012-182-080		C-CAP,U 27P-50 CH
C560	87-010-197-080		CAP, CHIP 0.01 DM
C701	87-012-286-080		CAP, U 0.01-25
C702	87-010-404-080		CAP, ELECT 4.7-50V
C702	87-012-286-080		CAP, U 0.01-25
C703	87-010-112-080		CAP, ELECT 100-16V
C704	87-010-759-080		C-CAP,U, 0.1-25F
C705	87-012-286-080		CAP, U 0.01-25
C706	87-012-286-080		CAP, U 0.01-25
C707	87-012-178-080		C-CAP,U 18P-50 CH
C708	87-012-178-080		C-CAP,U 18P-50 CH
C709	87-012-274-080		CHIP CAP,U 1000P-50B
C710	87-012-274-080		CHIP CAP,U 1000P-50B
C711	87-012-274-080		CHIP CAP,U 1000P-50B
C712	87-012-274-080		CHIP CAP,U 1000P-50B
C713	87-010-403-040		CAP,E 3.3-50 SME
C714	87-010-403-040		CAP,E 3.3-50 SME
C715	87-012-188-080		C-CAP,U 47P-50 CH
C716	87-012-188-080		C-CAP,U 47P-50 CH
C717	87-012-188-080		C-CAP,U 47P-50 CH
C718	87-010-401-040		CAP,E 1-50 SME
C719	87-010-401-040		CAP,E 1-50 SME
C775	87-010-404-080		CAP, ELECT 4.7-50V
C781	87-010-405-080		CAP, ELECT 10-50V
C782	87-010-405-080		CAP, ELECT 10-50V
C791	87-010-405-080		CAP, ELECT 10-50V
CN101	87-A60-424-010		CONN,16P V TOC-B
CN403	87-099-556-010		CONN,10P TUC-P10X-B1
CN406	87-A60-109-010		CONN,2P V S2M-2W
CNA102	8A-CLD-624-010		CONN ASSY,6P CD-ME
FB702	87-008-372-080		FILTER, EMI BL OIRNI
FB703	87-008-372-080		FILTER, EMI BL OIRNI
FB704	87-008-372-080		FILTER, EMI BL OIRNI
FB705	87-A91-720-080		C-F-BEAD, FBMJ3216HS800-T
FB706	87-A91-720-080		C-F-BEAD, FBMJ3216HS800-T
FB707	87-A91-720-080		C-F-BEAD, FBMJ3216HS800-T
FB708	87-A91-720-080		C-F-BEAD, FBMJ3216HS800-T
J501	87-009-502-010		JACK,PIN 1P Y EARTH
L101	87-005-196-080		COIL,10UH
L301	87-A50-095-010		COIL,68UH RCR875D
L302	87-005-426-080		COIL,3.3UH K FLR50
L502	87-005-204-080		COIL,47UH
L503	87-005-189-080		COIL 2.7UH
L504	87-005-187-080		COIL,1.8UH
L505	87-005-204-080		COIL,47UH
L506	87-005-204-080		COIL,47UH
L507	87-005-204-080		COIL,47UH
L508	87-005-817-080		C-COIL, 33UH J FLC32
L509	87-003-143-080		COIL 4.7 UH
L510	87-003-143-080		COIL 4.7 UH
R507	87-A00-408-080		C-RES,S 2K-1/10W D
S201	88-CDV-607-010		SW,SL 2-2-3 SK23D02G9
X201	87-A70-124-080		VIB,CER 8.0MHZ
X501	87-A70-125-080		VIB,XTAL 27MHZ 50PPM
X701	87-030-270-080		VIB,XTAL 16.9344MHZ
FR C.B			
C601	87-012-178-080		C-CAP,U 18P-50 CH
C602	87-012-182-080		C-CAP,U 27P-50 CH
C603	87-012-193-080		C-CAP,U 82P-50 CH
C604	87-012-176-080		CAP 15P
C605	87-012-186-080		C-CAP,U 39P-50 CH
C606	87-010-831-080		C-CAP,U,0.1-16F
C607	87-010-759-080		C-CAP,U, 0.1-25F
C608	87-010-831-080		C-CAP,U,0.1-16F
C609	87-012-286-080		CAP, U 0.01-25
C610	87-010-370-040		CAP,E 330-6.3 SME
C611	87-010-759-080		C-CAP,U, 0.1-25F
C612	87-010-248-080		CAP, ELECT 220-10V
C613	87-010-402-080		CAP, ELECT 2.2-50V
C614	87-010-759-080		C-CAP,U, 0.1-25F
C615	87-010-400-080		CAP, ELECT 0.47-50V
C616	87-010-401-080		CAP, ELECT 1-50V
C617	87-012-274-080		CHIP CAP,U 1000P-50B
C618	87-010-560-040		CAP,E 10-50 GAS
C620	87-010-759-080		C-CAP,U, 0.1-25F
C627	87-A10-826-080		C-CAP,S 1-10 K B
C630	87-010-759-080		C-CAP,U, 0.1-25F
C631	87-010-831-080		C-CAP,U,0.1-16F
C633	87-012-286-080		CAP, U 0.01-25
C634	87-012-286-080		CAP, U 0.01-25
C635	87-012-286-080		CAP, U 0.01-25
CN601	87-099-029-010		CONN,12P 6216H
CNA602	8A-CLD-623-010		CONN ASSY,2P LED
L601	87-003-171-010		COIL,15UH TROIDAL
L603	87-003-171-010		COIL,15UH TROIDAL
LCD601	8A-CLD-610-010		LCD,AIW4239ACL-13
LED609	87-A40-626-010		LED,L-934ID RED
S601	87-A91-704-080		SW,TACT EVQ 214 05R
S602	87-A91-704-080		SW,TACT EVQ 214 05R
S603	87-A91-704-080		SW,TACT EVQ 214 05R
S604	87-A91-704-080		SW,TACT EVQ 214 05R
S605	87-A91-704-080		SW,TACT EVQ 214 05R
S608	87-A91-704-080		SW,TACT EVQ 214 05R
S609	87-A91-704-080		SW,TACT EVQ 214 05R
S610	87-A91-704-080		SW,TACT EVQ 214 05R
S611	87-A91-704-080		SW,TACT EVQ 214 05R
S612	87-A91-704-080		SW,TACT EVQ 214 05R
S613	87-A91-704-080		SW,TACT EVQ 214 05R
S614	87-A91-704-080		SW,TACT EVQ 214 05R
X601	87-030-273-010		VIB,XTAL 32.768K5PPM
X602	87-030-376-080		VIB,CER CSA5.76MG200
DECK C.B			
C30	87-010-260-080		CAP, ELECT 47-25V
C501	87-010-248-080		CAP, ELECT 220-10V
C507	87-010-406-080		CAP, ELECT 22-50
C508	87-010-406-080		CAP, ELECT 22-50
C509	87-010-401-080		CAP, ELECT 1-50V

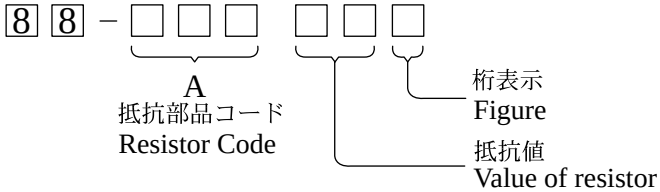
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C510	87-010-401-080		CAP, ELECT 1-50V
C511	87-012-274-080		CHIP CAP,U 1000P-50B
C512	87-012-274-080		CHIP CAP,U 1000P-50B
C516	87-012-276-080		CAP, CHIP SS 1500 PBK
C517	87-012-276-080		CAP, CHIP SS 1500 PBK
C521	87-010-401-080		CAP, ELECT 1-50V
C522	87-010-401-080		CAP, ELECT 1-50V
C523	87-012-274-080		CHIP CAP,U 1000P-50B
C524	87-012-274-080		CHIP CAP,U 1000P-50B
C529	87-012-274-080		CHIP CAP,U 1000P-50B
C530	87-012-274-080		CHIP CAP,U 1000P-50B
C531	87-018-205-080		CAP, CERA-SOL 0.022
C534	87-010-248-080		CAP, ELECT 220-10V
C543	87-012-286-080		CAP, U 0.01-25
C544	87-018-124-080		CAP, CER 270P-50V
C545	87-012-274-080		CHIP CAP,U 1000P-50B
C546	87-010-263-080		CAP, ELECT 100-10V
C551	87-012-282-080		CAP, U 4700P-50
C552	87-012-274-080		CHIP CAP,U 1000P-50B
C559	87-018-134-080		CAPACITOR,TC-U 0.01-16
CN204	87-A60-136-010		CONN,11P V FE
CN501	87-A60-110-010		CONN,4P V S2M-4W
CN502	87-049-469-010		CONN,4P V
L501	87-007-342-010		COIL,OSC 85K BIAS
R540	87-029-124-010		RES,FUSE 2.2-1/4
SW501	8Z-CD9-609-010		SW,SL 1-6-2 PS62D01

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
LED C.B			
CN603	87-A60-109-010		CONN,2P V S2M-2W
LED601	87-A40-161-010		LED,L-1154SGD
LED602	87-A40-161-010		LED,L-1154SGD
LED603	87-A40-161-010		LED,L-1154SGD
LED604	87-A40-161-010		LED,L-1154SGD
LED605	87-A40-161-010		LED,L-1154SGD
LED606	87-A40-161-010		LED,L-1154SGD
PT C.B			
C903	87-A11-146-080		CAP,TC U 0.022-50 Z F
C904	87-A11-146-080		CAP,TC U 0.022-50 Z F
C905	87-A11-146-080		CAP,TC U 0.022-50 Z F
C906	87-A11-146-080		CAP,TC U 0.022-50 Z F
C907	87-018-134-080		CAPACITOR,TC-U 0.01-16
CNA901	8A-CLD-627-010		CONN ASSY,2P PWR
⚠F901	87-035-219-010		FUSE, 500MA'T'
FC903	87-A90-505-080		FUSE CLAMP,TP00351-51
FC904	87-A90-505-080		FUSE CLAMP,TP00351-51
⚠PR901	87-A90-092-080		PROTECTOR,2.5A 491
⚠SW901	87-A90-178-010		SW SL1-1-2
⚠TM901	87-A60-317-010		TERMINAL, 1P MSC
⚠TM902	87-A60-317-010		TERMINAL, 1P MSC
MOTOR C.B			
M2	9X-262-576-910		MOTOR GEAR ASSY
PIN3	91-564-722-110		CONENECTOR 6P
SW1	91-572-085-120		LEAF SW

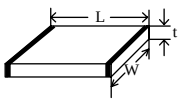
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

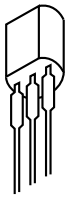
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

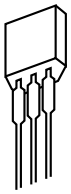
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION



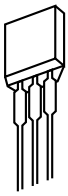
E C B

2SA1296
DTC114YS



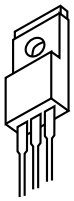
E C B

DTC124XS



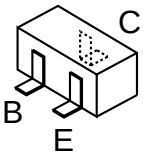
E C B

2SA933
2SC1740
DTC114TS



B C E

2SB1370



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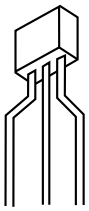
RT1P144C
DTA123JK
DTA124XK
DTC124XK
2SC2712
2SA1162
DTC114EK

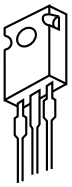


G OUT IN

DTA124X

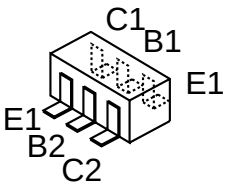
E C B

2SC1815

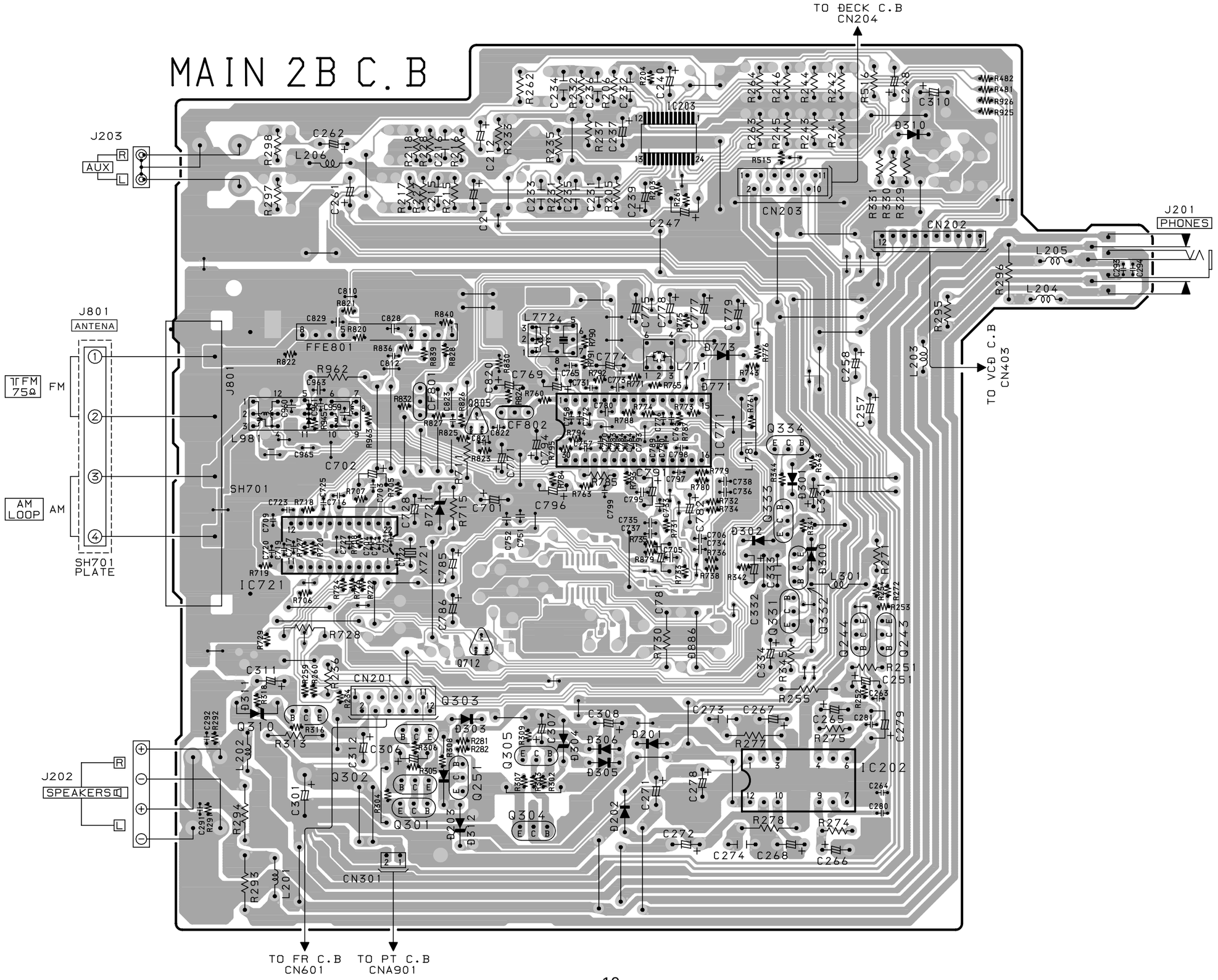


E C B

2SA1357



HN1C03F


MAIN 2B C.B
TO DECK C.B
CN204
J203
AUX
R
L
J801
ANTENA
TFM
75Ω
FM
AM
LOOP
AM
SH701
PLATE
J202
SPEAKERS
J201
PHONES
TO VCB C.B
CN403
TO FR C.B
CN601
TO PT C.B
CNA901
IC203
IC721
IC202
CN203
CN202
CN201
CN301
Q334
Q333
Q331
Q332
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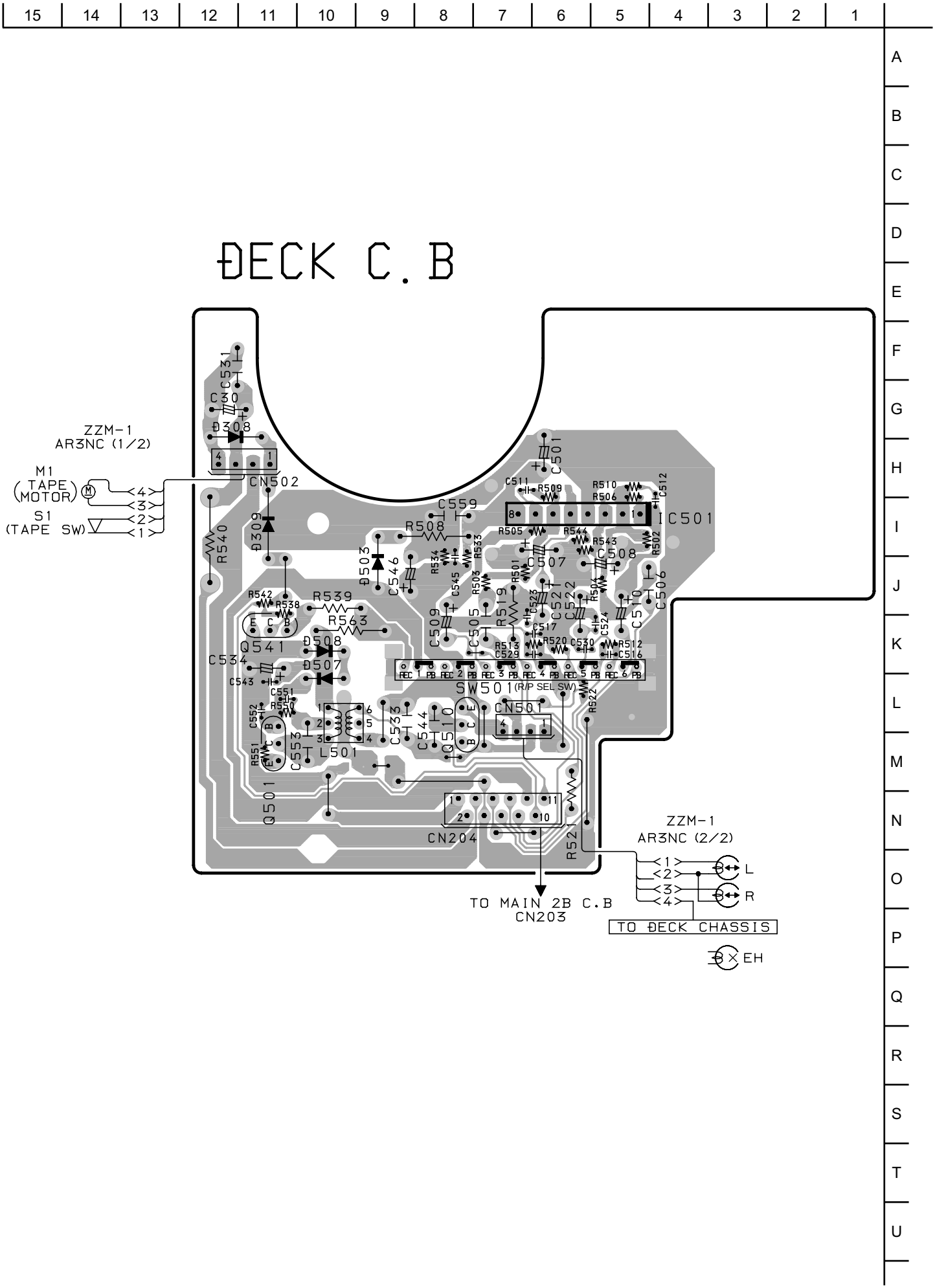
FFE801
CF802
CF801
SH701


15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
A B C D E F G H I J K L M N O P Q R S T U
ÐECK C.B
ZZM-1
AR3NC (1/2)
M1
(TAPE)
MOTOR
S1
(TAPE SW)
CN502
Ð308
Ð309
Ð503
Ð508
Ð507
R540
R542
R538
R539
R563
Q541
C534
C543
C551
C552
R552
R551
C553
L501
Q501
C533
C544
Q510
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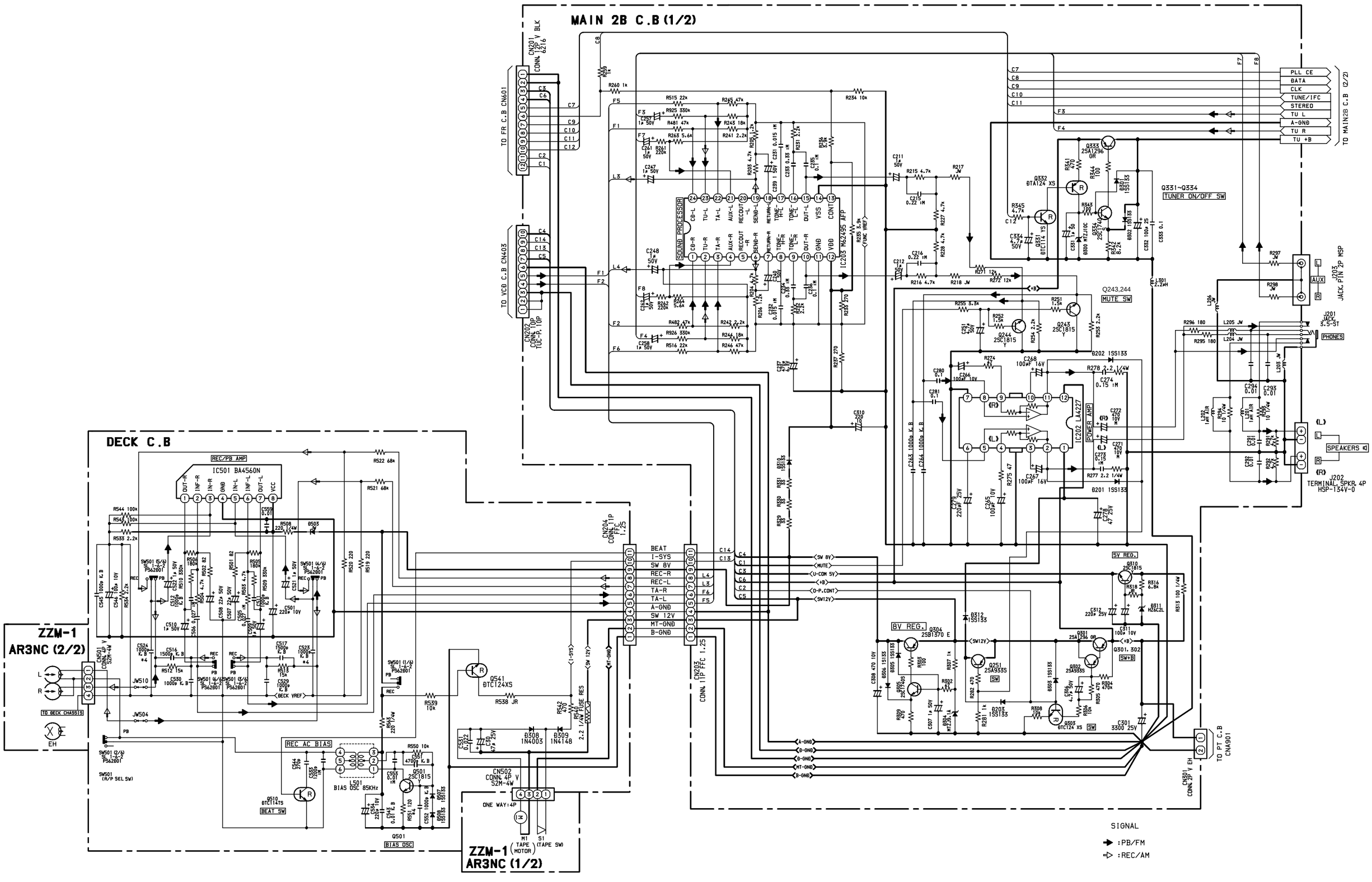
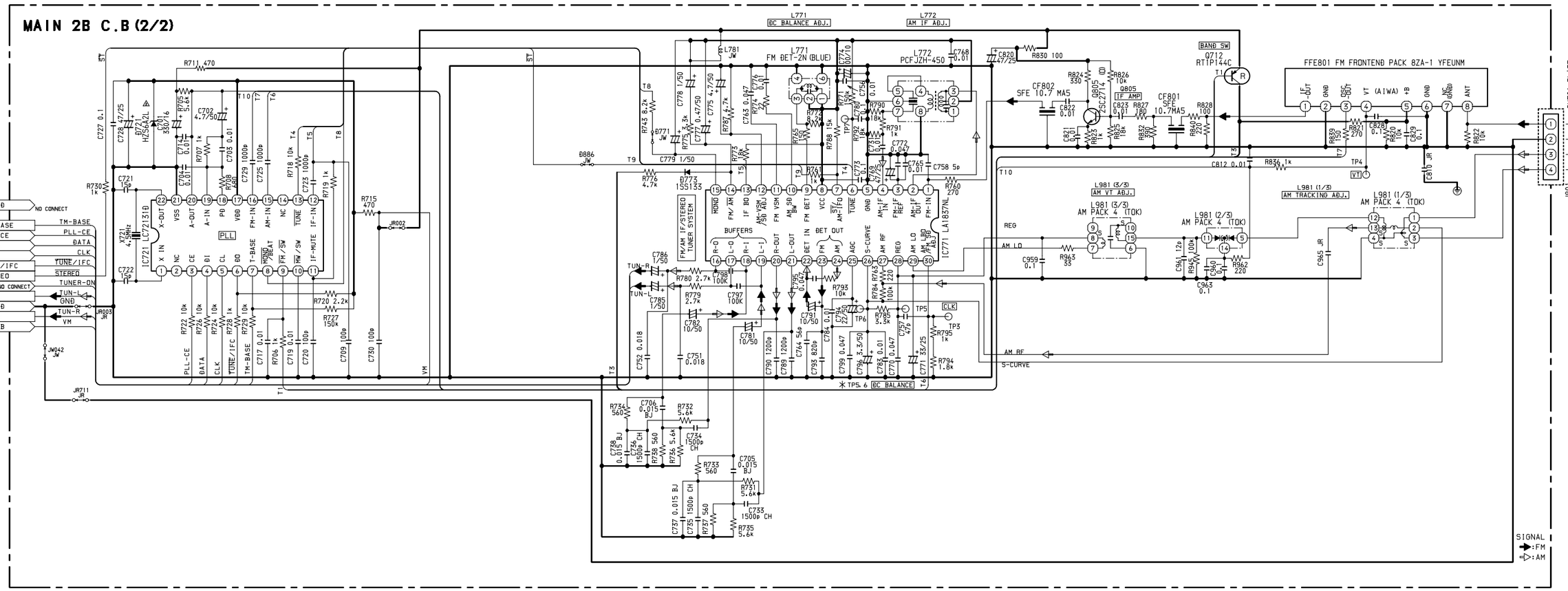
R502
R544
R543
R505
C511
R509
R510
R506
C512
C501
IC501
SW501 (R/P SEL SW)
REC 1 PB REC 2 PB REC 3 PB REC 4 PB REC 5 PB REC 6 PB
CN501
R522
CN204
R521
TO MAIN 2B C.B
CN203
ZZM-1
AR3NC (2/2)
L
R
TO ÐECK CHASSIS
EH

SCHEMATIC DIAGRAM-1 (MAIN 2B 1/2, DECK)

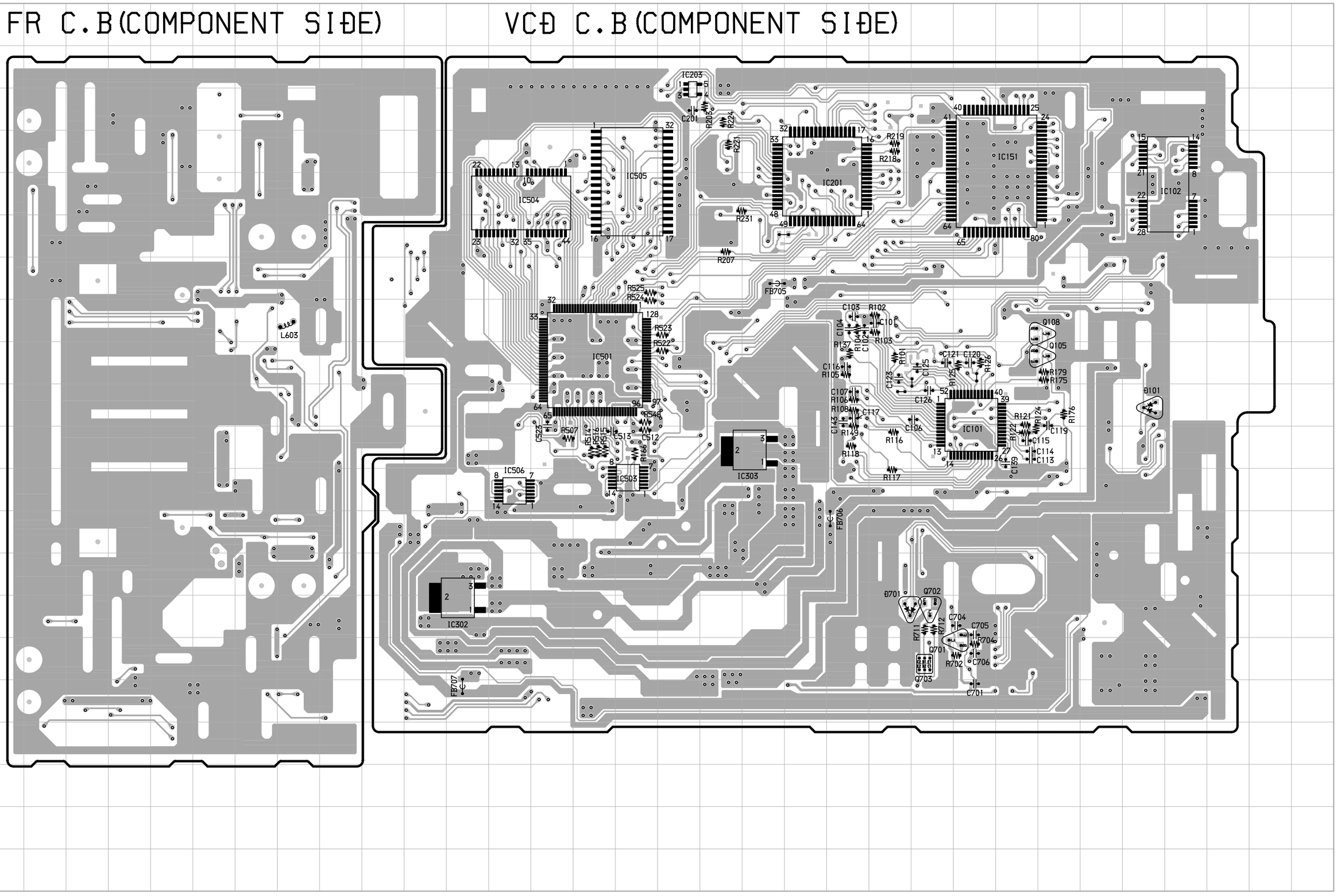


SCHEMATIC DIAGRAM-2 (MAIN 2B 2/2)

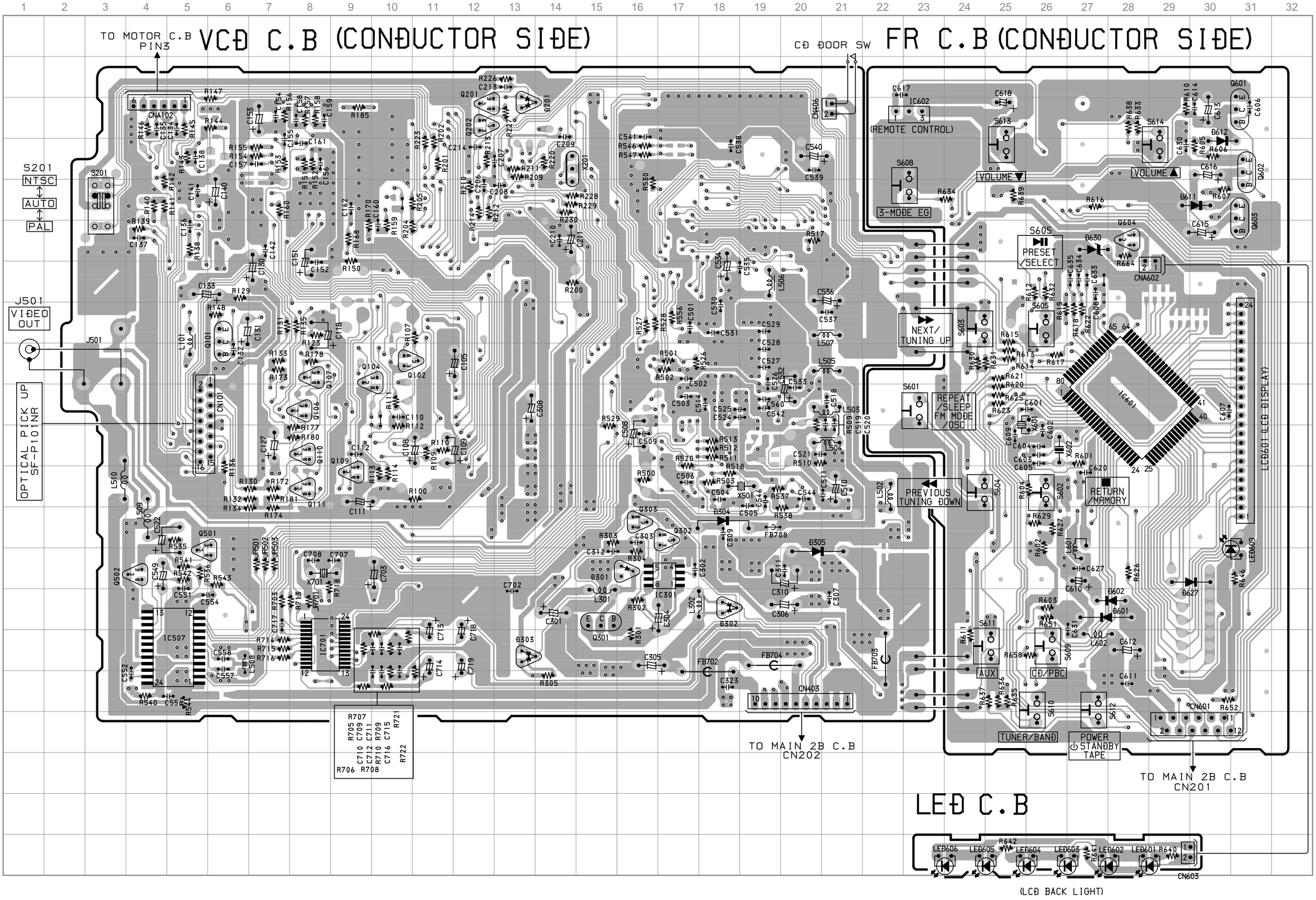


FR C.B(COMPONENT SIDE)

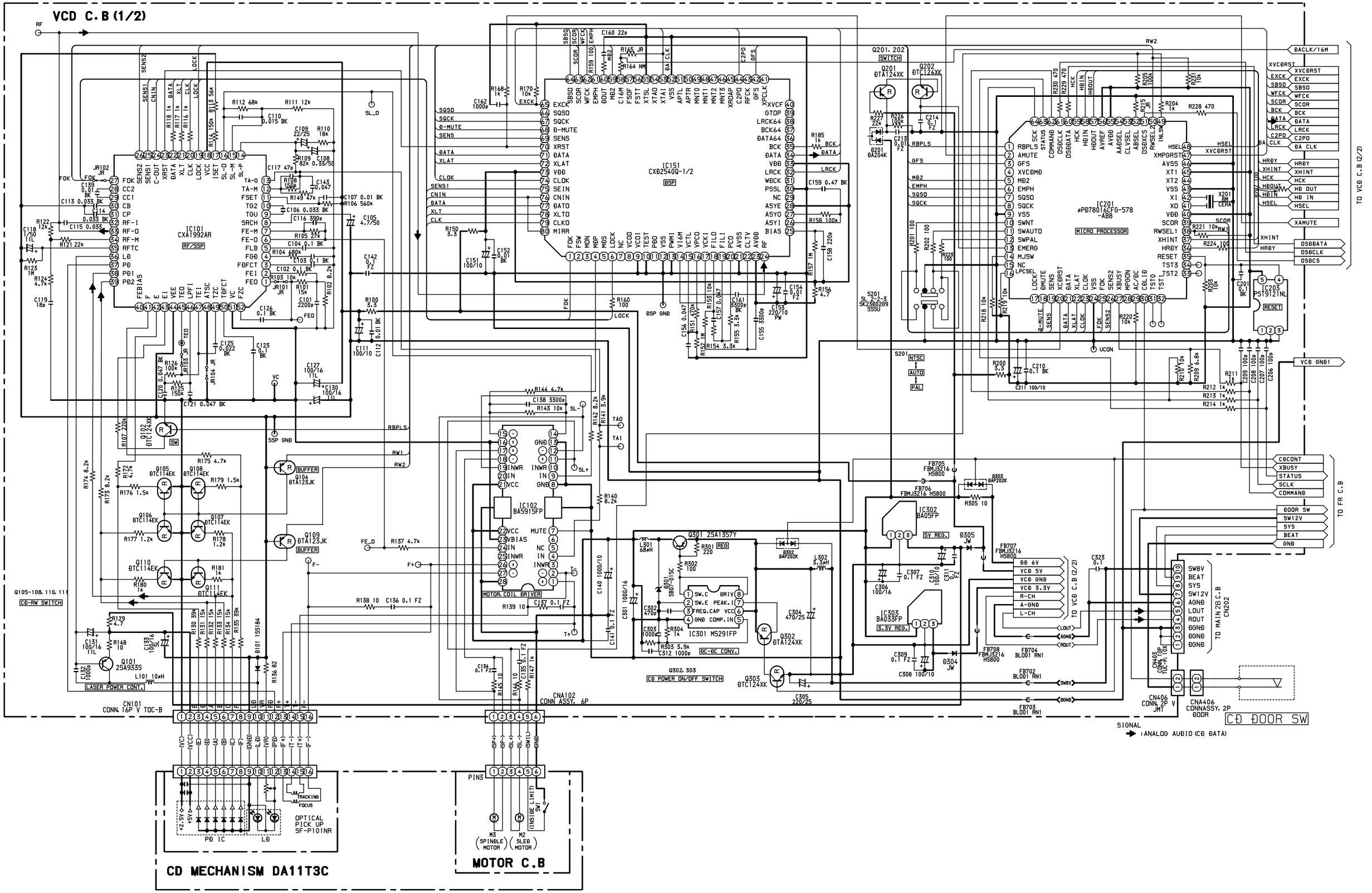
VCD C.B(COMPONENT SIDE)

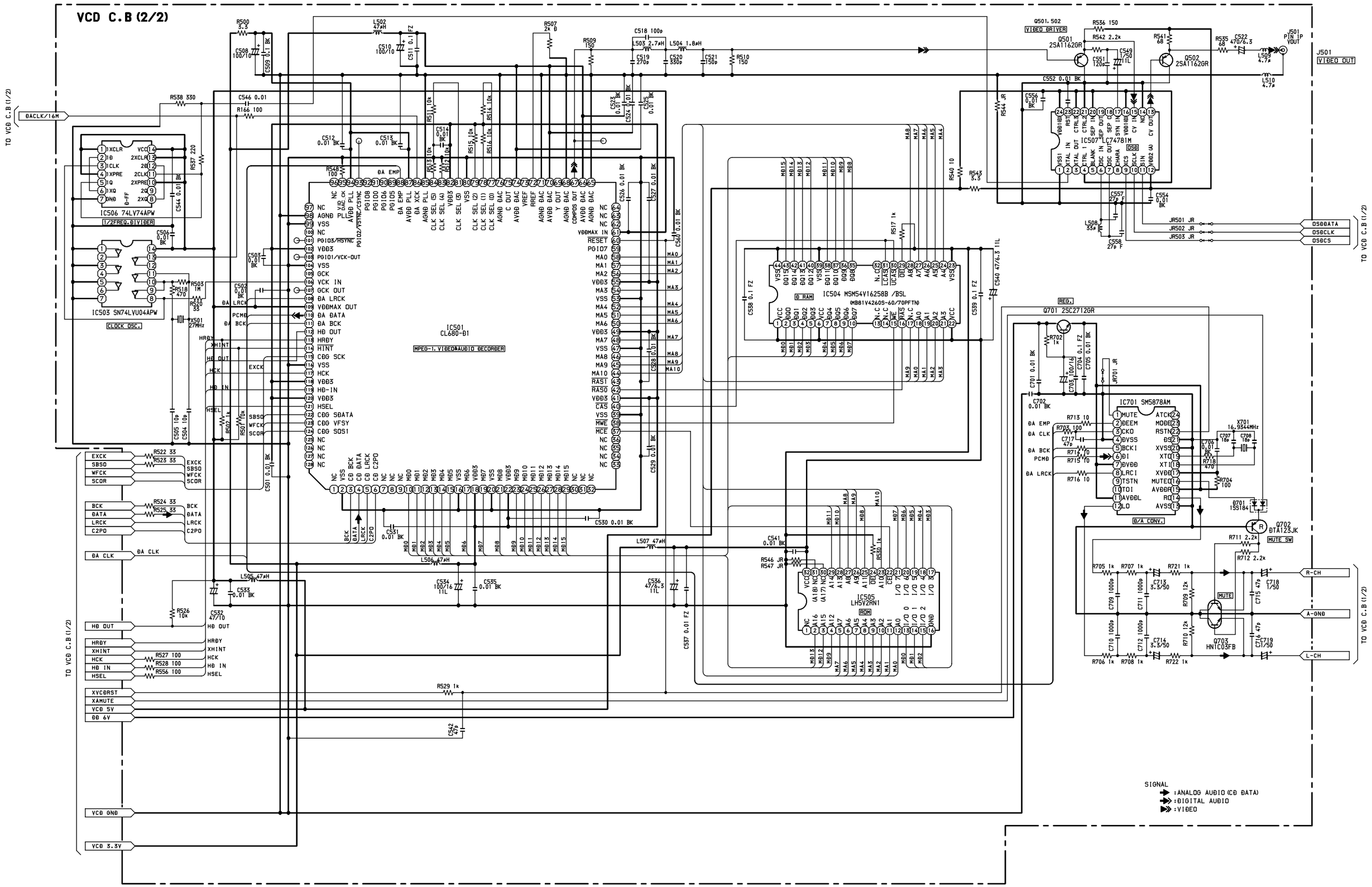


WIRING-4 (VCD, FR <CONDUCTOR>, LED)



SCHEMATIC DIAGRAM-3 (VCD 1/2)




VCD C.B (2/2)
IC501 CL680-D1
MPEG-1 VIDEO&AUDIO DECORDER
IC506 74LV74APW
1/2FREQ.DIVIDER
IC503 SN74LVU04APW
CLOCK OSC.
IC504 MSM54V16258B /BSL
(MB81V42605-60/70PFTN)
D RAM
IC507 LC74781M
OSD
IC505 LH5V2RN1
ROM
IC701 SM5878AM
D/A CONV.
Q501,502 VIDEO DRIVER
Q501 2SA1162GR
Q502 2SA1162GR
REG.
Q701 2SC2712GR
Q702 DTA123JK
Q703 HN1C03FB
MUTE SW
MUTE
TO VCD C.B (1/2)
DACLK/16M
EXCK
SBSD
WFCK
SCOR
BCK
DATA
LRCK
C2PO
DA CLK
HD OUT
HRDY
XHINT
HCK
HD IN
HSEL
XVCDRST
XAMUTE
VCD 5V
DD 6V
VCD GND
VCD 3.3V
OSDDATA
OSDCLK
OSDCS
R-CH
A-GND
L-CH
SIGNAL
:ANALOG AUDIO (CD DATA)
:DIGITAL AUDIO
:VIDEO

SCHEMATIC DIAGRAM-5 (FR, LED)

FR C.B

LED C.B

LCD601 AIW4239ACL-13
LCD DISPLAY

REMOTE CONTROL
IC602 RPM6938 V11

IC601
LC867140V-5T17
SYSTEM CONTROL

TO VCD C.B
CD CONT
XBUSY
STATUS
SCLK
COMMAND
DOOR SW
SW12V
SYS
BEAT
GND

TO MAIN2B C.B
CN201
CN601
CONN, 12P
6216
O-MUTE
O-P.CONT
O-TU ON
STEREO
TUNE/IFC
CLK
DO
CE
+B
u-COM 5V
D-GND

OPERATION LED
LED609
LED 93418 RED

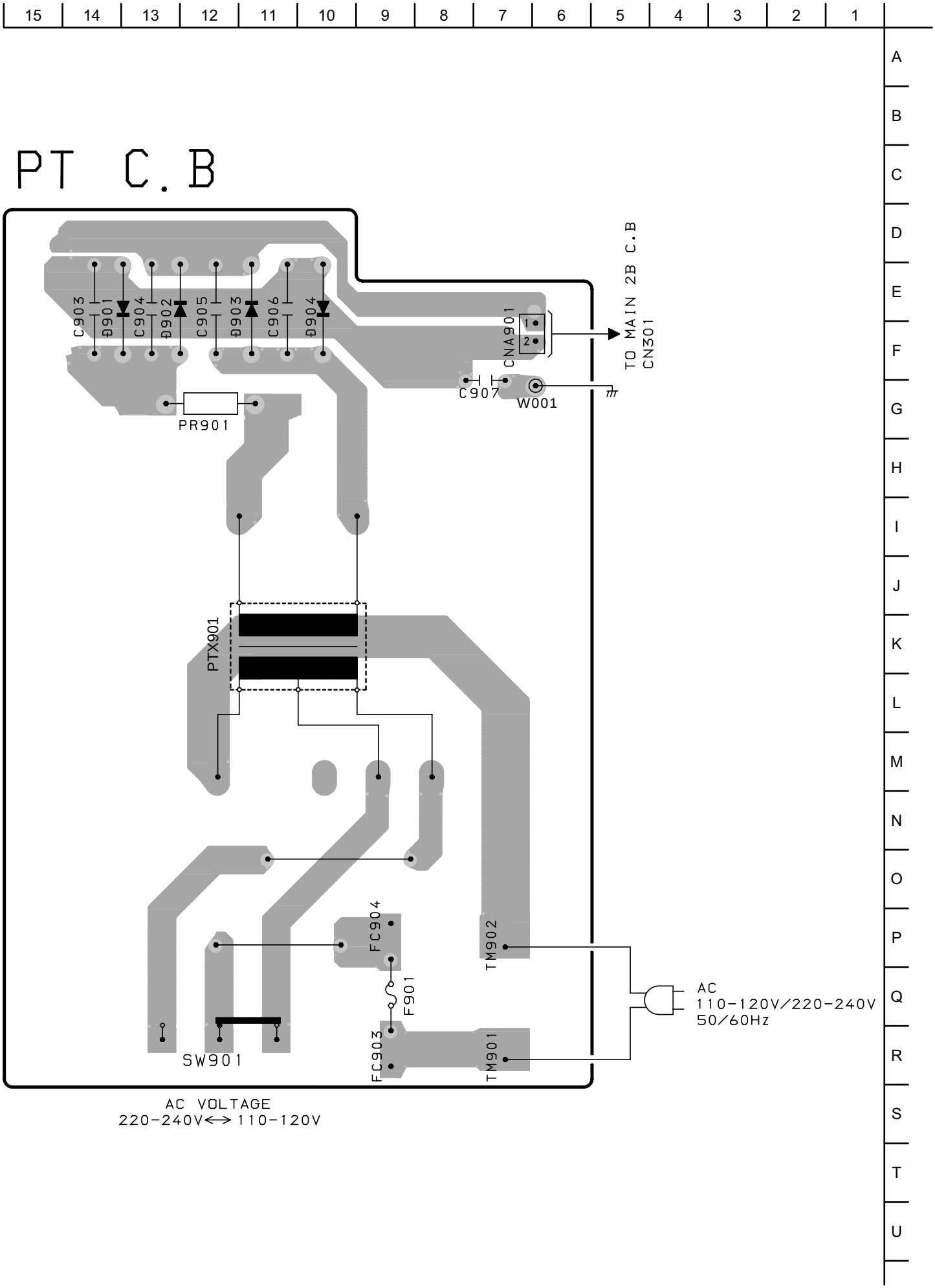
BACK LIGHT CONTROL
LCD BACK LIGHT
CN602
CONN ASSY, 2P
BK
BK LIGHT
CN603
CONN, 2P

LED602
LED601
LED604
LED603
LED606
LED605
LED L-1154SGD

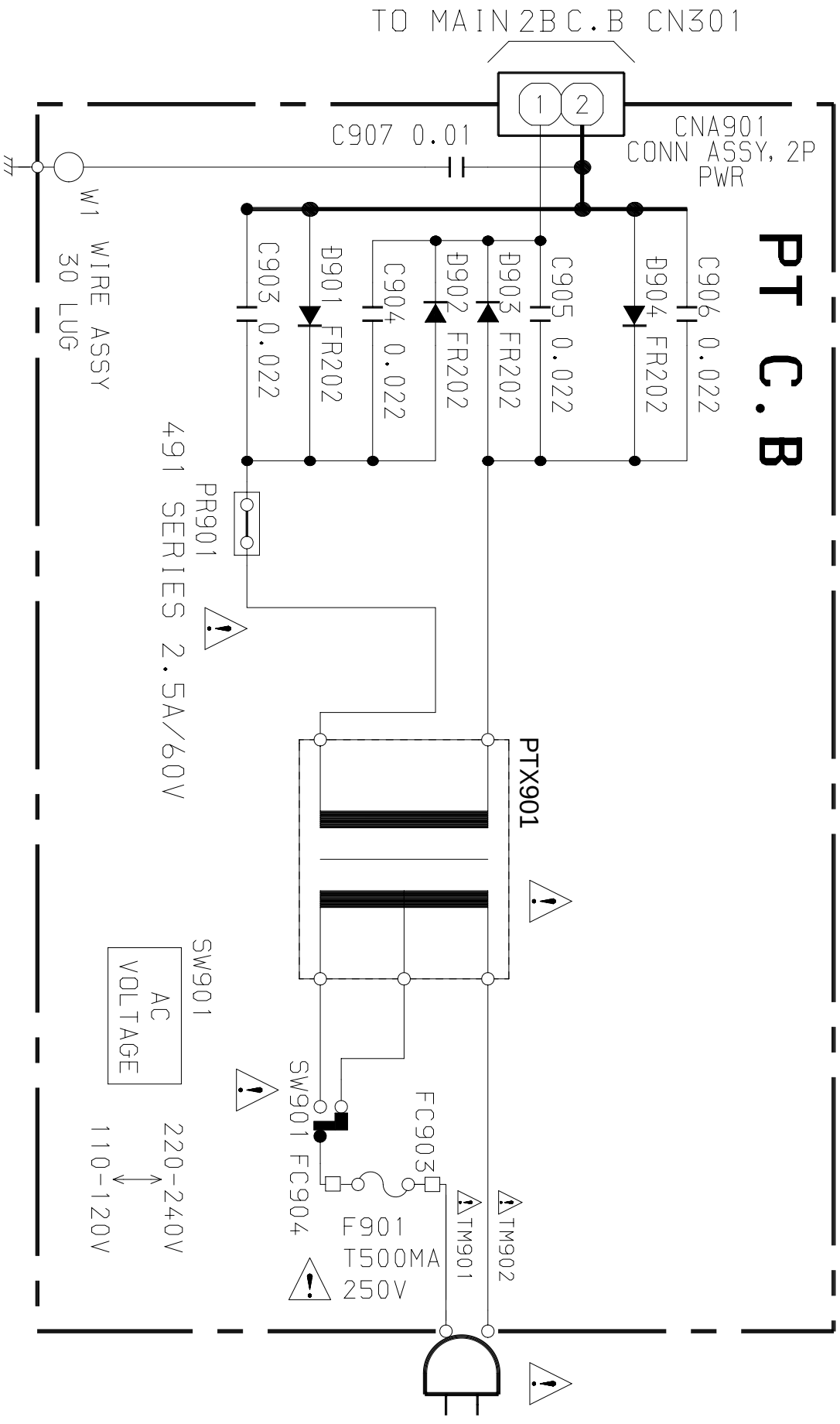
S601 S602 S603 S604 S605 S608 S609 S610 S611 S612 S613 S614

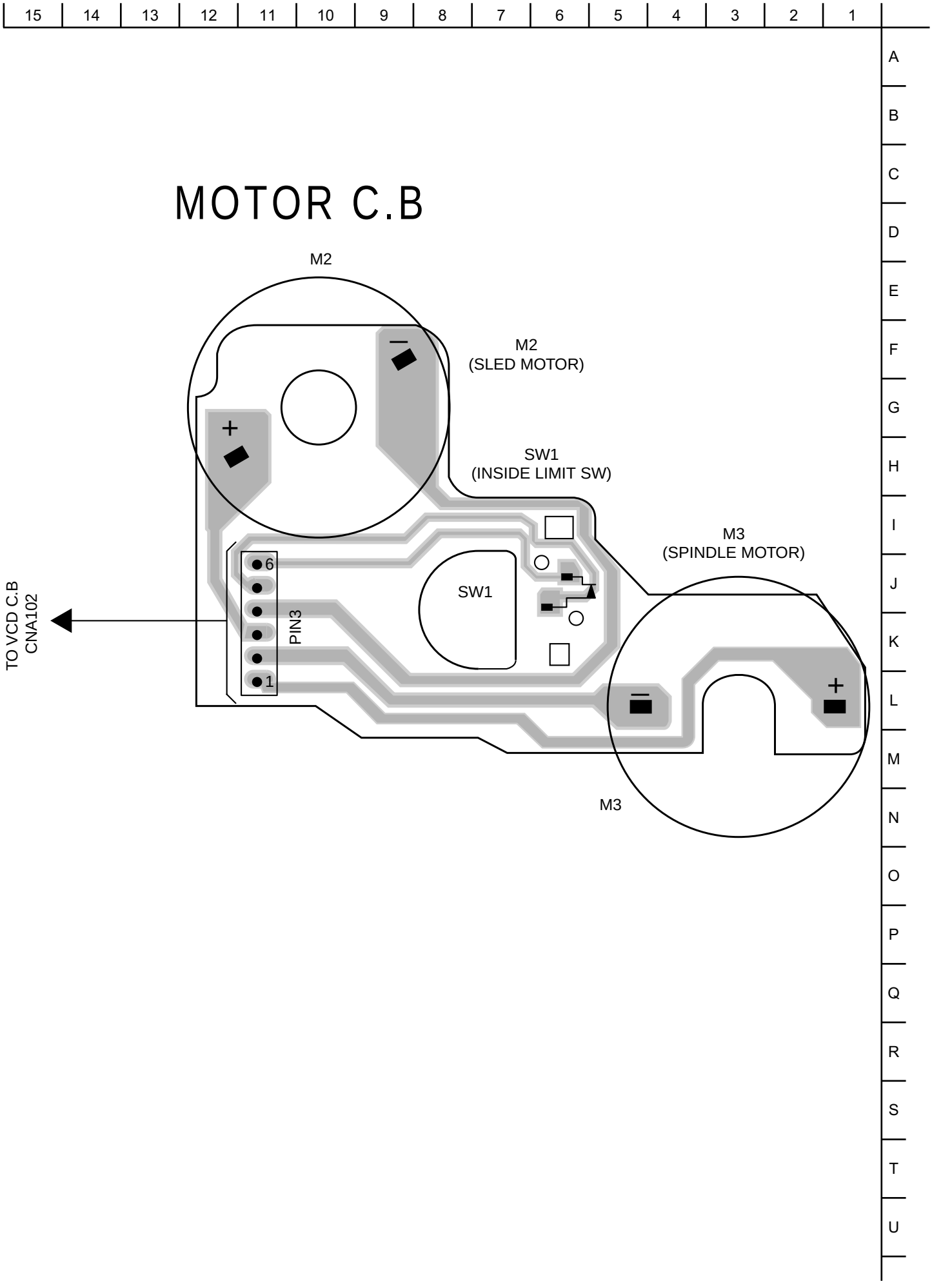
S601-S608, S614 SW, TACT EVQ 214 05R

HOLD & RESET

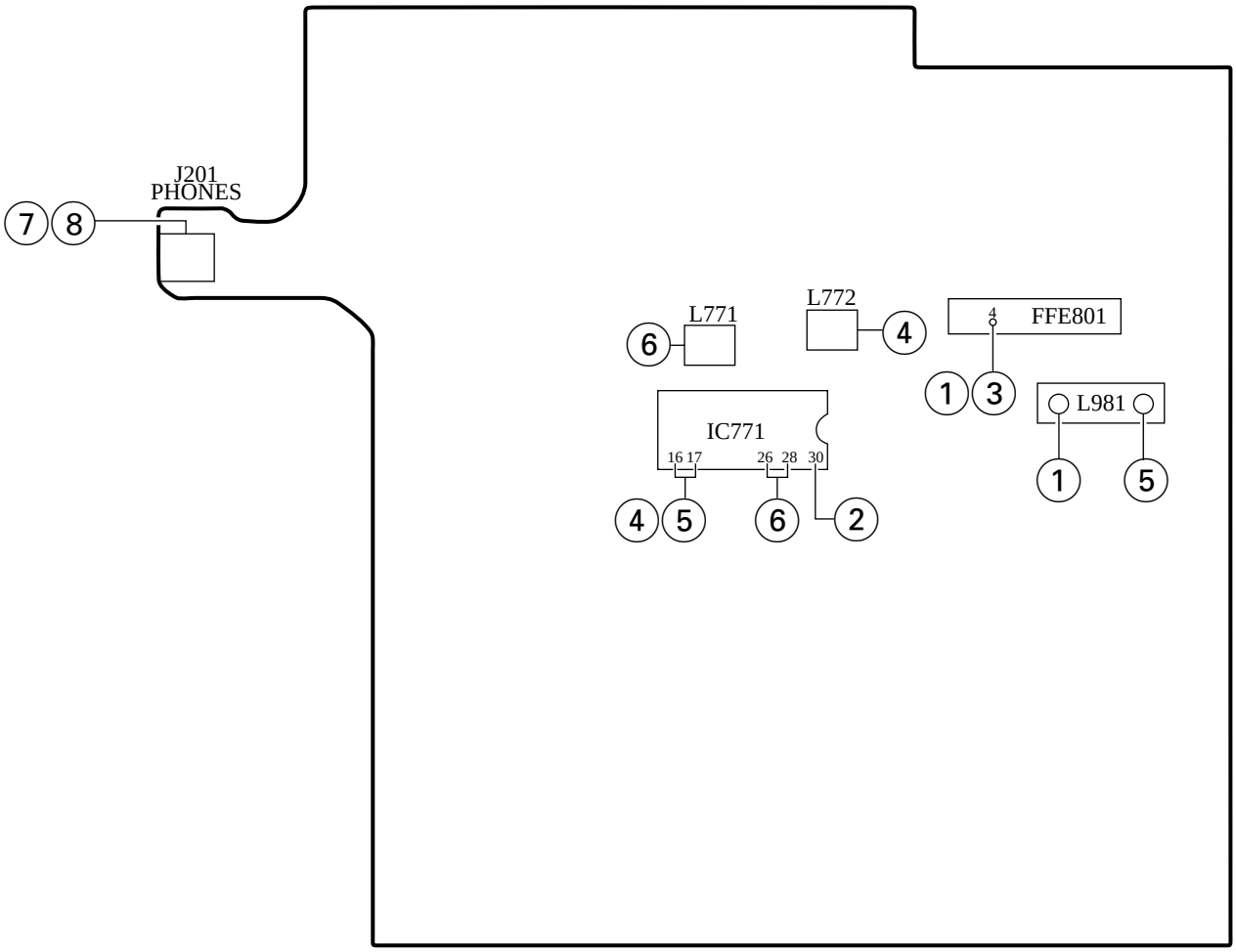

15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
A B C D E F G H I J K L M N O P Q R S T U
PT C.B
C903
D901
C904
D902
C905
D903
C906
D904
CNA901
1
2
TO MAIN 2B C.B
CN301
C907
W001
PR901
PTX901
FC904
F901
FC903
SW901
TM902
TM901
AC
110-120V/220-240V
50/60Hz
AC VOLTAGE
220-240V⟷110-120V

SCHEMATIC DIAGRAM-6 (PT)

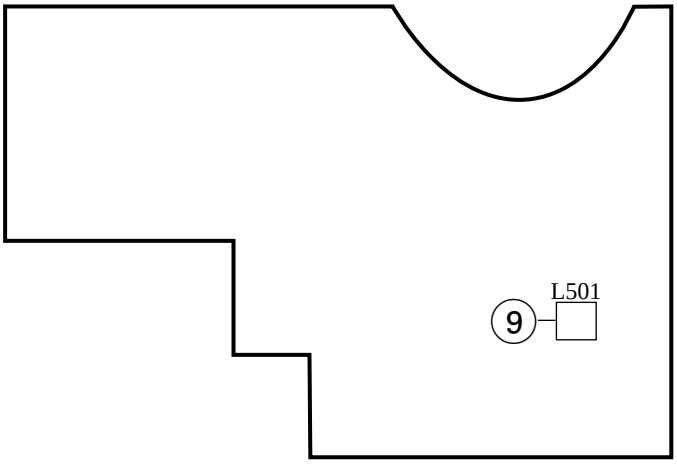



15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U
MOTOR C.B
M2
M2
(SLED MOTOR)
SW1
(INSIDE LIMIT SW)
M3
(SPINDLE MOTOR)
SW1
PIN3
6
1
TO VCD C.B
CNA102
M3

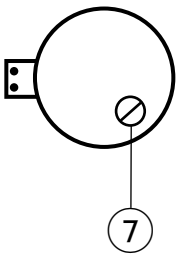
MAIN 2B C.B (Component side)



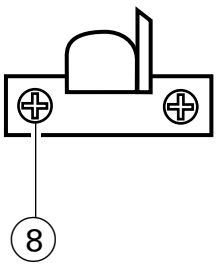
DECK C.B



M1 (TAPE MOTOR)



RPH



< TUNER SECTION >

1. AM VT Adjustment
   Test point: FFE801 (4PIN)
   Adjustment location: L981 (3/3)
   7.5V±0.05V 1710kHz
   0.3V (CHECK) 530kHz

2. Clock Frequency Check
   Settings: Test point: IC771 (LA1837NL) 30PIN
   Method: Set to AM 1602kHz and check that the test point becomes 2052kHz±45Hz.

3. FM VT Check
   Test point: FFE801 (4PIN)
   8.0V 108.0MHz
   0.5V 87.5MHz

4. AM IF Adjustment
   Settings:
   - Test point: IC771 (LA1837NL) 16, 17PIN
   - Adjustment location: L772

   Method: Adjust L772 so that the output level at 1000kHz/999kHz becomes maximum.

5. AM Tracking Adjustment
   Settings:
   - Test point: IC771 (LA1837NL) 16, 17PIN
   - Adjustment location: L981 (1/3)

   Method: Adjust L981 (1/3) so that the output level at 1000kHz/999kHz becomes maximum.

6. DC Balance Adjustment
   Settings:
   - Test point: IC771 (LA1837NL) 26, 28PIN
   - Adjustment location: L771
   - Frequency: 98.0MHz

   Method: Set to FM 98.0MHz and adjust L771 so that the voltage between 26PIN and 28PIN becomes 0V±0.04V.

< TAPE SECTION >

7. Tape speed Adjustment
   Settings:
   - Test tape: TTA-100
   - Test point: J201 (PHONES jack)
   - Adjustment location: SFR of deck motor

   Method: Play back the test tape and adjust SFR so that the frequency counter reads 3000Hz ±30Hz.

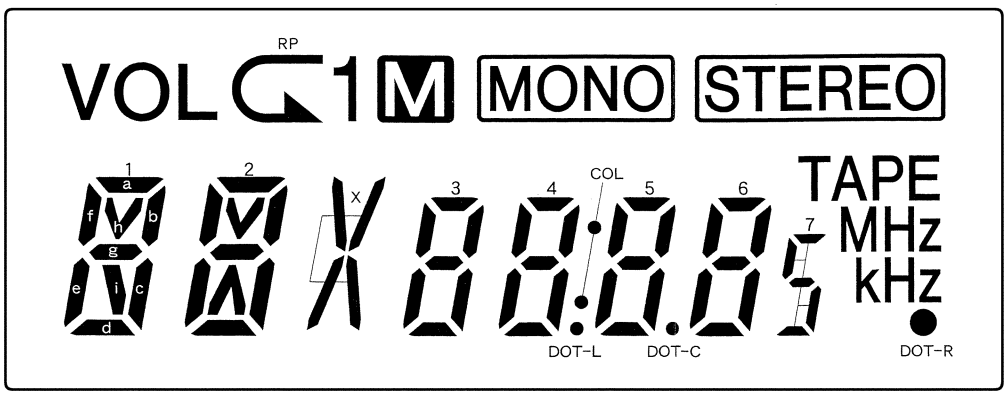
8. Head Azimuth Adjustment
   Settings:
   - Test tape: TTA-320
   - Test point: J201 (PHONES jack)
   - Adjustment location: Azimuth adjustment screw.

   Method: Play back the 8kHz signal of the test tape and adjust screw so that the output becomes maximum.

9. Bias frequency Adjustment
   L501 ..... 85kHz ±0.5kHz

FL (AIWA4239ACL-13) GRID ASSIGNMENT/ANODE CONNECTION

GRID ASSIGNMENT



ANODE CONNECTION

NO	COM1	COM2	COM3
1	2b	2c	2d
2	1b	1c	1d
3	1a	1f	1e
4	1h	1g	1i
5	—	—	VOL
6	2a	2f	2e
7	2h	2g	2i
8	3f	3e	RP
9	3a	3g	3d
10	3b	3c	1
11	4f	4e	M
12	4a	4g	4d
13	4b	4c	X
14	col	DOT-L	MONO
15	5f	5e	DOT-R
16	5a	5g	5d
17	5b	5c	DOT-C
18	6f	6e	STEREO
19	6a	6g	6d
20	6b	6c	7
21	TAPE	MHz	KHz
22	COM1	—	—
23	—	COM2	—
24	—	—	COM3

VOLTAGE CHART

FUNCTION : CD
TEST CONDITION : CD STOP

IC601 : LC867140V-5T17

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
4.9	0	0	–	0	0	3.5	1.9	2.3	0	1.6	2.2	4.8	0	5.0	0	5.0	5.0	0	–

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
0	–	–	–	4.8	–	–	5.2	–	–	–	–	–	–	–	–	–	–	–	–

41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
4.8	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
–	–	–	–	–	–	–	0	4.8	4.8	0	4.8	–	4.7	0	0	–	4.8	4.8	4.8

IC201 uPD78016CFG-578

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	4.7	0	4.98	4.98	0	0	4.98	0	0	4.97	4.97	4.97	5	0	5	–	0	0	5

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
5	5	5	0	0	0.15	0.1	–	5	0	0	0	0	0	5	4.98	4.98	0	0	5

41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
–	–	0	–	5	0	5	4.85	0.35	0	–	0	–	–	5	5	–	–	–	–

61	62	63	64
–	4.79	4.98	4.83

IC101 CXA1992AR

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2.46	2.46	2.44	2.46	2.46	2.46	2.46	2.65	2.46	2.36	0.8	2.47	2.47	2.46	2.46	2.46	1.3	4.94	0	4.93

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
4.93	4.93	4.98	0.1	0.1	0.1	0	2.2	3.6	3.1	1.3	2.46	2.5	2.46	2.59	4.68	0	2.46	2.46	–

41	42	43	44	45	46	47	48	49	50	51	52
2.46	2.46	2.46	0	2.46	2.42	2.47	2.46	2.45	2.45	2.46	2.46

IC151 CXD2540Q

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	–	–	2.46	–	0	–	–	0	0	–	0	0	1.34	0	0	1.34	3.05	2.53	–

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
0	3.05	4.9	2.5	0.9	2.5	–	4.9	–	0	–	–	4.9	0	–	–	–	–	–	–

41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
–	0	–	4.9	–	–	–	–	–	–	–	0	–	–	0	–	–	–	5	–

61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
0	–	0	–	0	0	5	0	0	4.98	4.98	4.98	4.93	5	0.1	0.1	4.93	4.93	4.93	0.1

IC102 BA5915FP

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2.6	2.6	–	2.46	–	–	0	0	2.46	–	2.6	2.6	0	2.46	2.46	2.46	2.6	2.6	2.46	–

21	22	23	24	25	26	27	28
5.7	5.7	2.46	2.46	–	2.6	2.6	0

IC701 SM5878AM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	0	–	0	–	0	4.7	–	–	–	4.7	2.3	0	2.3	4.7	4.6	4.65	–	–	0

21	22	23	24
0	5	–	–

IC507 LC74781M

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	–	–	5	–	–	–	–	4.8	5	0.2	4.8	1.6	0	1.6	5	2.6	–	–	5

21	22	23	24
0	5	5	5

IC503 SN74LVU04APW

1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	–	0	–	0	–	0	2.5	2.47	2.47	2.36	2.66	2.22	4.98

IC506 74LV74APW

1	2	3	4	5	6	7	8	9	10	11	12	13	14
4.98	2.49	2.5	4.98	2.35	2.49	0	2.49	–	4.98	2.35	2.49	4.98	4.98

IC501 CL680-D1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
–	0	–	0	–	4.93	–	–	–	–	–	0	0	–	–	0	–	3.12	–	0

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
–	3.12	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	–

41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
3.12	–	–	–	–	–	0	–	3.12	–	–	–	0	–	3.12	–	–	–	0	4.99

61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
4.98	–	–	–	0	3.26	–	0	–	3.26	0	1.27	–	3.26	–	0	3.12	3.12	3.12	0

81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
3.11	3.12	0	0	0	–	3.29	0	–	–	–	–	–	3.29	0	–	–	0	0	–

101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
–	3.12	3.29	0	–	–	–	–	4.98	0	–	–	4.98	4.98	0	0	–	3.12	–	3.12

121	122	123	124	125	126	127	128
–	–	–	0	–	–	–	–

IC504 MSM54V16258B

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
3.29	–	–	0	0	3.29	–	0	0	–			–	–	3.15	–	–	–	–	–

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
0	3.29	0	–	–	–	–	–	0	3.12	3.12	–			0	0	0	0	0	0

41	42	43	44
0	0	0	0

IC505 LH5V2RN1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
–	0	–	–	–	–	–	–	–	–	–	–	–	–	–	0	–	–	–	–

21	22	23	24	25	26	27	28	29	30	31	32
–	3.14	–	0	0	–	–	0	0	0	0	3.29

IC301 M5291FP

1	2	3	4	5	6	7	8
4.3	0	0.9	0	1.2	8.6	8.6	4.3

IC203 PST9121NL

1	2	3	4	5
–	0	0	5	5

IC302 BA05FP

1	2	3
5.7	0	5.0

IC302 BA033FP

1	2	3
5.7	0	3.3

Q301 2SA1357Y

E	C	B
8.6	5.8	8.0

Q701 2SC2712GR

E	C	B
4.7	5.5	5.41

Q501 2SA1162GR

E	C	B
1.53	0	0.86

Q502 2SA1162GR

E	C	B
2.3	0	1.6

Q702 DTA123JK

E	C	B
4.07	4.05	0

Q703 HN1C03FB

E	C	B
0	0	0.74

Q201 DTA124XK

E	C	B
4.6	0	4.9

Q202 DTC124XK

E	C	B
0	5	0

Q302 DTA124XK

E	C	B
8.6	8.6	0

Q303 DTC124XK

E	C	B
0	0	4.4

Q104 DTA123JK

E	C	B
0	0.8	0

Q109 DTA123JK

E	C	B
0	0.7	0

Q102 DTC124XK

E	C	B
2.5	2.4	0

Q110,111 DTC114EK

E	C	B
2.5	2.5	0.7

Q105-108 DTC114EK

E	C	B
2.5	2.5	0.8

Q101 2SA933S

E	C	B	
5	0	4.7	Laser OFF
5	2.2	3.4	Laser ON

FUNCTION : TUNER
TEST CONDITION : FM(87.5MHz),AM(531kHz)

IC721 : LC72131D

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2.7	–	0	0.5	0	5.5	–	9.1	0	0	0	0	10.1	–	0	2.8	5.5	1	1	1
2.7	–	0	0.5	0	5.5	–	0	10.2	0	0	0	10.1	–	2.7	0	5.5	1	1	1.4

21	22
0	2.7
0	2.7

IC771 : LC1837NL

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
3.6	10.2	3.6	3.6	0	10.1	6.0	10.2	10.2	1.4	0.2	0	0.6	9.1	9.1	4.4	4.4	4.4	4.4	4.4
3.6	10.2	3.6	3.6	0	10.1	6.0	10.2	10.2	1.4	0	0	0.6	5.5	6.0	4.3	4.3	4.3	4.3	3.4

21	22	23	24	25	26	27	28	29	30
3.4	2.9	3.2	0.1	0	3.7	3.7	3.7	3.7	2.0
3.4	2.9	–	0.6	0.6	3.6	3.6	3.7	3.7	1.9

Q333 2SA1296

E	C	B
14.7	10.2	14.0

FUNCTION : AUX
TEST CONDITION : TAPE STOP

IC501 : BA4560N

1	2	3	4	5	6	7	8
3.9	3.9	3.8	0	3.8	3.9	3.9	7.7

IC203 : M62495AFP

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	5.8	3.4	0	2.9	2.9	2.9	2.9	2.9	2.9

21	22	23	24
2.9	2.9	2.9	2.9

IC202 : LA4227

1	2	3	4	5	6	7	8	9	10	11	12
13.5	6.7	12.6	1.2	0	13.5	0	0	1.2	12.6	6.7	14.9

Q301 2SA1296 Q304 2SB1370E Q310 2SC1815GR Q251 2SA933S

E	C	B
14.9	14.2	14.2

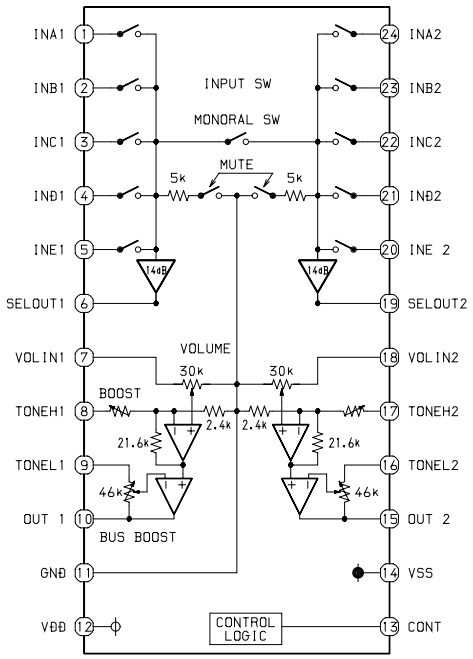
E	C	B
14.2	8.7	13.6

E	C	B
5.5	12.7	6.2

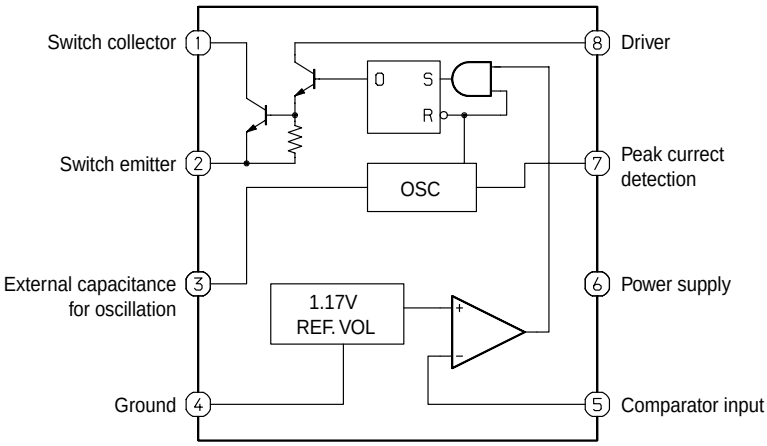
E	C	B
14.2	14.2	13.5

IC BLOCK DIAGRAM

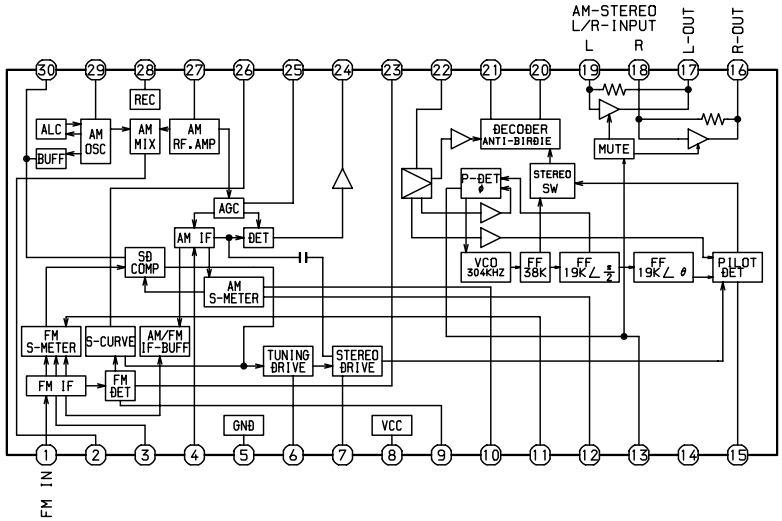
IC, M62495AFP



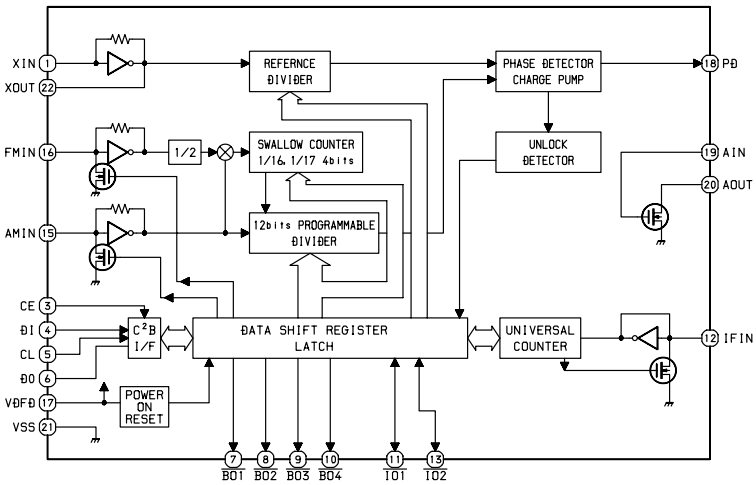
IC, M5291FP



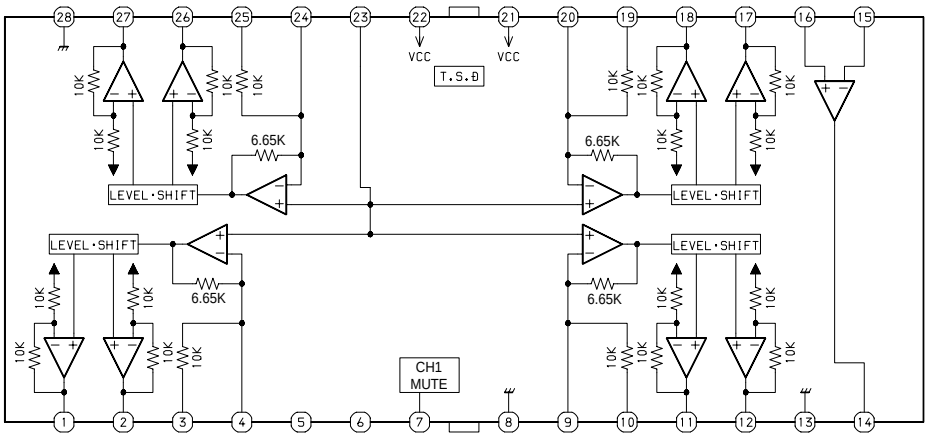
IC, LA1837NL



IC, LC72131D

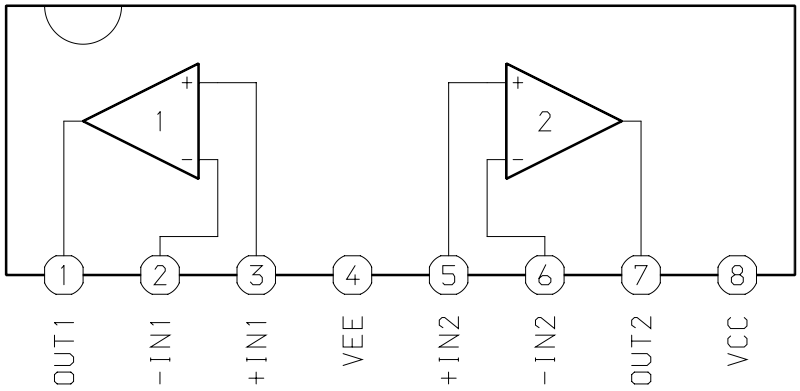


IC, BA5915FP

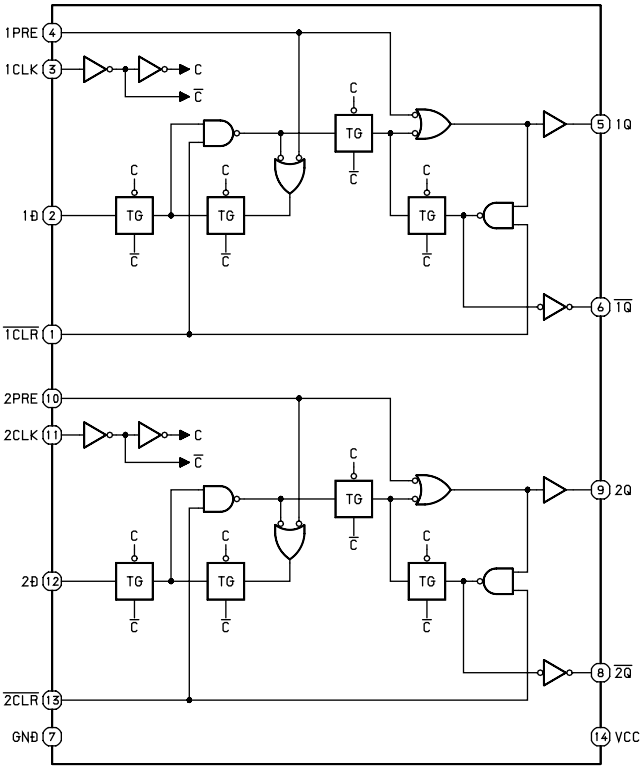


T.S.D: Thermal shut-down
Resistors are in units of Ω.

IC, BA4560N



IC, SN74LV74APW



IC DESCRIPTION
IC, CXA1992AR

Pin No.	Pin Name	I/O	Description
1	FEO	O	Output terminal for focus error amplifier. Internally connected to window comparator input for bias condition.
2	FEI	I	Input terminal for focus error.
3	FDFCT	I	Capacitor connection terminal for time constant used when there is defect.
4	FGD	I	This pin is connected to GND via capacitor when high frequency gain of the focus servo is attenuated.
5	FLB	I	This is a pin where the time constant is externally connected to raise the low frequency gain of the focus servo.
6	FE_O	O	Focus drive output.
7	FEM	I	Focus amplifier inverted input pin.
8	SRCH	I	This is a pin where the time constant is externally connected to generate the focus search waveform.
9	TGU	I	This is a pin where the selection time constant is externally connected to set the tracking servo the high frequency gain.
10	TG2	I	This is a pin where the selection time constant is externally connected to set the tracking high frequency gain.
11	FSET	I	Pin for setting peak of the phase compensator of the focus tracking. (Pull up)
12	TA_M	I	Tracking amplifier inverted input pin.
13	TA_O	O	Tracking drive output.
14	SL_P	I	Sled amplifier non-inverted input pin.
15	SL_M	I	Sled amplifier inverted input pin.
16	SL_O	O	Sled drive output.
17	ISET	I	The current which determines height of the focus search, track jump and sled kick is input with external resistance connected. (Pull down)
18	Vcc	I	Power supply.
19	LOCK	I	“L” setting starts sled disorder-prevention circuit. (Not pull-up resistance)
20	CLK	I	Clock input for serial data transfer from CPU. (No pull-up resistance)
21	XLT	I	Latch input from CPU. (No pull-up resistance)
22	DATA	I	Serial data input from CPU. (No pull-up resistance)
23	XRST	I	Reset system at “L” setting. (No pull-up resistance)
24	C_OUT	O	Signal output for track number counting.
25	SENS1	O	FZC, DFCT1, TZC, BALH, TGH, FOH, or ATSC is output depending on the command from CPU.
26	SENS2	O	DFCT2, MIRR, BALL, TGL or FOL is output depending on the command from CPU.
27	FOK	O	Output terminal for focus OK comparator.
28	CC2	I	Input pin where the DEFECT bottom hold output is capacitance coupled.
29	CC1	O	DEFECT bottom-hold output terminal. Internally connected to interruption comparator input.
30	CB	I	Connection terminal for DEFECT bottom-hold capacitor. (Pull down)
31	CP	I	Connection terminal for MIRR hold-capacitor. Anti-reverse input terminal for MIRR comparator. (Pull down)
32	RF_I	I	Input terminal by capacity combination of RF summing amplifier.

Pin No.	Pin Name	I/O	Description
33	RF_O	O	Output terminal of RF summing amplifier. Checkpoint of Eye pattern.
34	RF_M	I	Anti-reverse input terminal for RF summing amplifier. The gain of RF amplifier is decided by the connection resistance between RF_M and RFO terminals.
35	RFTC	I	This is a pin where the selection time constant is externally connected to control the RF level. (Pull down)
36	LD	O	APC amplifier output terminal.
37	PD	I	APC amplifier input terminal.
38, 39	PD1, PD2	I	RFI-V amplifier inverted input pin. These pins are connected to the A+C and B+C pins of the optical pickup, receiving by currents input.
40	FEBIAS	I/O	Bias adjustment pin of the focus error amplifier. (Not connected)
41, 42	F, E	I	F and EIV amplifier inverted input pins. These pins are connected to the F and E of the optical pickup, receiving by current input.
43	EI	—	Gain adjustment pin of the I-V amplifier E. (When not in use of BAL automatic adjustment)
44	VEE	—	GND connection pin.
45	TEO	O	Output terminal for tacking-error amplifier. Output E-F signal.
46	LPFI	I	BAL adjustment comparator input pin. (Input through LPF from TEO)
47	TEI	I	Input terminal for tracking error.
48	ATSC	I	Window-comparator input terminal for detecting ATSC. (Pull up)
49	TZC	I	Input terminal for tracking-zero cross comparator.
50	TDFCT	I	Capacitor connection pin for the time constant used when there is defect. (Pull up)
51	VC	O	Output terminal for DC voltage reduced to half of VCC+VEE.
52	FZC	I	Input terminal for focus-zero cross comparator.

Pin No.	Pin Name	I/O	Description
1	FOK	I	Focus OK input. Used for SENS output and the servo auto sequencer.
2	FSW	O	Spindle motor output filter switching output. (Not connected)
3	MON	O	Spindle motor on/off control output. (Not connected)
4	MDP	O	Spindle motor servo control.
5	MDS	O	Spindle motor servo control. (Not connected)
6	LOCK	O	High, when sampled value of GFS at 460Hz is high. Low, when sampled value of GFS at 460Hz is low by 8 times successively.
7	NC	—	Not used.
8	VCOO	O	Analog EFM PLL oscillation circuit output. (Not connected)
9	VCOI	I	Analog EFM PLL oscillation circuit input. fLOCK=8.6436MHz. (Connected to ground)
10	TEST	I	TEST pin. (Connected to ground)
11	PDO	O	Analog EFM PLL charge pump output. (Not connected)
12	VSS	—	GND. (Connected to ground)
13	PWMI	I	Spindle motor external control input. (Connected to ground)
14	V16M	O	VCO2 oscillation output for the wide-band EFM PLL.
15	VCTL	I	VCO2 control voltage input for the wide-band EFM PLL.
16	VPCO	O	Wide-band EFM PLL charge pump output.
17	VCKI	I	VCO2 oscillation input for the wide-band EFM PLL.
18	FILO	O	Multiplier PLL (slave=digital PLL) filter output.
19	FILI	I	Multiplier PLL filter input.
20	PCO	O	Multiplier PLL charge pump output.
21	AVSS	—	Analog GND.
22	CLTV	I	Multiplier VCO1 control voltage input.
23	AVDD	—	Analog power supply (5V).
24	RF	I	EFM signal input.
25	BIAS	I	Constant current input of the asymmetry circuit.
26	ASYI	I	Asymmetry comparator voltage input.
27	ASYO	O	EFM full-swing output.
28	ASYE	I	Low: asymmetry circuit off; high: asymmetry circuit on.
29	NC	—	Not used.
30	PSSL	I	Audio data output mode switching input. Low: serial output; high: parallel output. (Connected to ground)
31	WDCK	O	D/A interface for 48-bit slot. Word clock f=2Fs. (Not connected)
32	LRCK	O	D/A interface for 48-bit slot. LR clock f=Fs.
33	VDD	—	Power supply (5V).
34	DATA	O	DA16 (MSB) output when PSSL=1. 48-bit slot serial data (two's complement, MSB first) when PSSL=0.
35	BCK	O	DA15 output when PSSL=1. 48-bit slot bit clock when PSSL=0.
36	DATA64	O	DA14 output when PSSL=1. 64-bit slot serial data (two's complement, LSB first) when PSSL=0. (Not connected)
37	BCK64	O	DA13 output when PSSL=1. 64-bit slot bit clock when PSSL=0. (Not connected)

Pin No.	Pin Name	I/O	Description
38	LRCK64	O	DA12 output when PSSL=1. 64-bit slot LR clock when PSSL=0. (Not connected)
39	GTOP	O	DA11 output when PSSL=1. GTOP output when PSSL=0. (Not connected)
40	XVCF	O	DA10 output when PSSL=1. XUGF output when PSSL=0. (Not connected)
41	XPCLK	O	DA09 output when PSSL=1. XPLCK output when PSSL=0. (Not connected)
42	GFS	O	DA08 output when PSSL=1. GFS output when PSSL=0.
43	RFCK	O	DA07 output when PSSL=1. RFCK output when PSSL=0. (Not connected)
44	C2PO	O	DA06 output when PSSL=1. C2PO output when PSSL=0.
45	XROAP	O	DA05 output when PSSL=1. XRAOF output when PSSL=0. (Not connected)
46	MNT3	O	DA04 output when PSSL=1. MNT3 output when PSSL=0. (Not connected)
47	MNT2	O	DA03 output when PSSL=1. MNT2 output when PSSL=0. (Not connected)
48	MNT1	O	DA02 output when PSSL=1. MNT1 output when PSSL=0. (Not connected)
49	MNT0	O	DA01 output when PSSL=1. MNT0 output when PSSL=0. (Not connected)
50	APTR	O	Aperture compensation control output. This pin outputs a high signal when the right channel is used. (Not connected)
51	APTL	O	Aperture compensation control output. This pin outputs a high signal when the left channel is used. (Not connected)
52	VSS	—	GND.
53	XTAI	I	Crystal oscillation circuit input.
54	XTAO	O	Crystal oscillation circuit output. (Not connected)
55	XTSL	I	Crystal selector input. (Connected to ground)
56	FSTT	O	2/3 frequency divider output for Pins 53 and 54. (Not connected)
57	FSOF	O	1/4 frequency divider output for Pins 53 and 54. (Not connected)
58	C16M	O	16.9344MHz output. (V16M output in CLV-W and CAV-W modes) (Not connected)
59	MD2	I	Digital-out on/off control. High: on; low: off
60	DOUT	O	Digital-out output.
61	EMPH	O	Outputs a high signal when the playback disc has emphasis, and a low signal when there is no emphasis.
62	WFCK	I	WFCK (write frame clock) output.
63	SCOR	O	Outputs a high signal when either subcode sync S0 or S1 is detected.
64	SBSO	O	Sub P to W serial output.
65	EXCK	I	SBSO readout clock input.
66	SQSO	O	Sub Q 80-bit and PCM peak, level metter and internal status outputs.
67	SQCK	I	SQSO readout clock input.
68	D-MUTE	I	High: mute; low: release
69	SENS	—	SENS output to CPU.
70	XRST	I	System reset. Reset when low.
71	DATA	O	Serial data input from CPU.
72	XLAT	O	Latch input from CPU. Serial data is latched at the falling edge.
73	VDD	—	Power supply (5V).
74	CLOK	O	Serial data transfer clock input from CPU.
75	SEIN	I	SENS input from SSP.

Pin No.	Pin Name	I/O	Description
76	CNIN	I	Track jump count signal input.
77	DATO	O	Serial data output to SSP.
78	XLTO	O	Serial data latch output to SSP. Latched at the falling edge.
79	CLKO	O	Serial data transfer clock output to SSP.
80	MIRR	I	Mirror signal input. Used when the number of tracks is 128 or more for the 2N-track jump and M track move of the auto sequencer.

Notes)

- The 64-bit slot is an LSB first, two's complement output, and the 48-bit slot is an MSB first, two's complement output.
- GTOP is used to monitor the frame sync protection status. (High: sync protection window open.)
- XUGF is the negative pulse for the frame sync obtained from the EFM signal. It is the signal before sync protection.
- XPLCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge and the EFM signal transition point coincide.
- GFS goes high when the frame sync and the insertion protection timing match.
- RFCK is derived from the crystal accuracy, and has a cycle of 136μ.
- C2PO represents the data error status.
- XRAOF is generated when the 32K RAM exceeds the ±28F jitter margin.

IC, CL680

Pin No.	Pin Name	I/O	Description
1	NC	—	No connection.
2	VSS	—	GND.
3	CD BCK	I	Bit clock input from CD DSP.
4	CD DATA	I	Data input from CD DSP.
5	CD LRCK	I	LRCK input from CD DSP.
6	CD C2PO	I	C2 pointer input from CD DSP.
7-9	NC	—	No connection.
10-15	MD0-MD5	I/O	DRAM/ROM interface. (DATA)
16	VSS	—	Ground.
17	MD6	I/O	DRAM/ROM interface. (DATA)
18	VDD3	—	Power supply 3.3V.
19	MD7	I/O	DRAM/ROM interface. (DATA)
20	VSS	—	Ground.
21	MD8	I/O	DRAM/ROM interface. (DATA)
22	VDD3	—	Power supply 3.3V.
23-29	MD9-MD15	I/O	DRAM/ROM interface. (DATA)
30-36	NC	—	No connection.
37	$\overline{\text{MCE}}$	—	ROM chip enable.
38	$\overline{\text{MWE}}$	O	DRAM write enable.
39	VSS	—	Ground.
40	$\overline{\text{CAS}}$	O	DRAM/ROM interface.
41	VDD3	—	Power supply 3.3V.
42	$\overline{\text{RASO}}$	O	DRAM/ROM interface.
43	$\overline{\text{RASI}}$	O	
44-46	MA10-MA8	O	DRAM/ROM interface. (Address)
47	VSS	—	Ground.
48	MA7	O	DRAM/ROM interface. (Address)
49	VDD3	—	Power supply 3.3V.
50-52	MA6-MA4	O	DRAM/ROM interface. (Address)
53	VSS	—	Ground.
54	MA3	O	DRAM/ROM interface. (Address)
55	VDD3	—	Power supply 3.3V.
56-58	MA2-MA0	O	DRAM/ROM interface. (Address)
59	PGIO7	I/O	Programmable I/O.
60	$\overline{\text{RESET}}$	I	Reset input.
61	VDD MAX IN	—	Power supply - VDDMAX. (5.0V)
62-64	NC	—	No connection.
65	AGND DAC	—	Analog ground.
66	A DAC	—	Analog power supply (DAC) : 3.3V.
67	COMPOS OUT	O	Composite out.
68	AGND DAC	—	Analog ground.

Pin No.	Pin Name	I/O	Description
69	Y OUT	O	Video signal “Y” OUT. (Not connected)
70	AVDD DAC	—	Analog power supply (DAC) 3.3V.
71	AGND DAC	—	Analog ground.
72	R REF	I	Reference resistor input. (Pull down)
73	V REF	I	Voltage reference input. (Not connected)
74	AVDD DAC	—	Analog power supply (DAC) : 3.3V.
75	C OUT	O	Video signal “C” out. (Not connected)
76	AGND DAC	—	Analog ground.
77-79	CLK SEL0-2	I	Clock selection input. (Pull up)
80	VSS	—	Ground.
81	CLK SEL3	I	Clock selection input.
82	VDD3	—	Power supply 3.3V.
83, 84	CLK SEL4, 5	I	Clock selection input. (Pull down)
85	AGND PLL	—	Analog ground.
86	DA XCK	I	DA XCK (16.933MHz) input.
87	AVDD PLL	—	Analog power supply 3.3V.
88	DA EMP	O	DAC-emphasis output.
89, 90	PGIO5, O6	I/O	Programmable I/O. (Not connected)
91	PGIO0	I/O	
92	PGIO8	I/O	
93	$\overline{\text{VSYNC}}$/CSYNC	O	$\overline{\text{VSYNC}}$/CSYNC output.
94	AVDD PLL	—	Analog power supply (PLL) 3.3V.
95	VID_DAC_CK	O	Video DAC clock. (Not connected)
96	PROC_CK	O	Processor clock. (Not connected)
97	AUD_XCK	O	Audio XCK. (Not connected)
98	AGND PLL	—	Analog ground.
99	VSS	—	Ground.
100	NC	—	No connection.
101	$\overline{\text{HSYNC}}$	O	$\overline{\text{HSYNC}}$ output.
102	VDD3	—	Power supply 3.3V.
103	VCK OUT	O	VCK out.
104	VSS	—	Ground.
105	GCK	I	Global clock signal input. (42.3MHz) (Not connected)
106	VCK IN	I	Video clock signal input. (27.0MHz)
107	GCK OUT	O	Global clock signal output. (27.0MHz)
108	DA LRCK	O	DAC-LRCK output.
109	VDD MAX OUT	—	Power supply (VDD MAX) : 5.0V.
110	DA DATA	O	DAC-PCM data output.
111	DA BCK	O	DAC-BIT clock output.
112	HD OUT	O	Micon interface. (Data out)
113	HRDY	O	Micon interface. (Host ready)

Pin No.	Pin Name	I/O	Description
114	$\overline{\text{HINT}}$	O	Micon interface. (Host interrupt)
115	CDG SCK	I	CD-G serial clock input.
116	VSS	—	Ground.
117	HCK	I	Micon interface. (Host clock)
118	VDD3	—	Power supply 3.3V.
119	HD IN	I	Micon interface. (Host data in)
120	VDD3	—	Power supply 3.3V.
121	HSEL	I	Micon interface. (Host select in)
122	CDG SDATA	I	CD-G data input.
123	CDG VFSY	I	CD-G VFSY input.
124	CDG SOSI	I	CD-G SOSI input.
125	DSP-XCK	O	DSP-XCK output. (Not connected)
126-128	NC	—	No connection.

Pin No.	Pin Name	I/O	Description
1	VSS1	—	GND connection terminal. (Digital ground terminal).
2	Xtal IN	I	External X'tal and capacitor for internal sync generator, or the external clock are connected to this terminal. (2fsc or 4fsc). (Pin3: Not connected)
3	Xtal OUT	O	
4	CTRL1	I	Either the external clock input mode or the X'tal generator mode is selected by this selector terminal. L: X'tal generator mode, H: External clock input. (Connected to Vdd)
5	BLANK	O	Blank signal (character and the green ORed signal) is output from this terminal. (MODE 0: composite sync signal is output at H.) When reset ($\overline{RST}$ terminal = L), the X'tal clock signal is output. (It is not output when reset by the reset command).
6	OSC IN	I	External coil and capacitor for the character output dot clock generator are connected to this terminal.
7	OSC OUT	O	
8	CHARA	O	The character signal is output from this terminal. (MOD 0: when H, the external sync signal identification signal is output from this terminal. This output signal tells whether the external sync signal is present or not. When external sync signal is present, H is output.) When reset ($\overline{RST}$ terminal = L), the dot clock signal (LC oscillator) is output. (It is not output when reset by the reset command).
9	XCS	I	Enable signal for the serial data input is input to this terminal. The serial data input is enabled at L. Pull-up resistor is built-in. (Hysteresis input).
10	SCLK	I	Clock of the serial data input is input to this terminal. Pull-up resistor is built-in. (Hysteresis input).
11	SIN	I	Serial data input terminal. Pull-up resistor is built-in. (Hysteresis input).
12	VDD2	—	Power supply for the composite video signal level adjustment. (Analog power supply).
13	CV OUT	O	Composite video signal output terminal.
14	NC	—	Connected to GND or not connected.
15	CV IN	I	Composite video signal input terminal.
16	VDD1	—	Power supply (+5V digital power supply).
17	SYN IN	I	Video signal for the internal sync separator circuit is input to this terminal. (When the internal sync separator circuit is not used, the horizontal sync signal or composite sync signal is input to this terminal).
18	SEP C	—	Internal sync separator circuit bias voltage monitoring terminal. (Not connected)
19	SEP OUT	O	The composite sync output signal of the internal sync separator circuit is output from this terminal. (H: MOD 1. H: during internal sync mode. L: during external sync mode.) (When internal sync separator circuit is not used, the SYN IN input signal is output from this terminal). (Not connected)
20	SEP IN	I	The output signal of the SEP OUT terminal is integrated so that the vertical sync signal is input to this terminal. An integrator circuit must be connected between the SEP OUT terminal and this terminal. When this terminal is not used, it must be connected to VDD1.
21	CTRL2	I	When selecting any of the NTSC or PAL or PAL-M or PAL-N system, the pin setting has priority. When L, the NTSC system is selected after resetting. Selection of either NTSC or PAL or PAL-M or PAL-N system by the command becomes effective. H: PAL-M system.

Pin No.	Pin Name	I/O	Description
22	CTRL3	I	Controls whether or not to input the $\overline{\text{VSYNC}}$ signal to the SEPIN input. L: to input the $\overline{\text{VSYNC}}$ signal. H: not to input the $\overline{\text{VSYNC}}$ signal. (Connected to Vdd)
23	RST	I	System reset input terminal. Pull-up resistor is built-in. (Hysteresis input). (Pull down)
24	VDD1	—	Power supply. (+5V digital power supply).

IC, µPD78016CFG-578-AB8

Pin No.	Pin Name	I/O	Description
1	RBPLS	O	RADIAL BALANCE PLUS.
2	AMUTE	O	AUDIO ANALOG MUTE (H=MUTE ON).
3	GFS	I	GFS.
4	XVCDMD	O	AUDIO/VIDEO CD MODE (L=VCD=SPINDLE GAIN UP).
5	MD2	O	DOUT MUTE CONT.
6	EMPH	I	EMPHASIS.
7	SQSO	I	SQDATA FROM CD.
8	SQCK	O	SQCLK TO CD.
9	VSS	—	GND.
10	SWNT	I	SW TV OUT MODE (L=NTSC).
11	SWAUTO	I	SW TV OUT MODE (L=NTSC/PAL AUTO).
12	SWPAL	I	SW TV OUT MODE (L=PAL).
13	EMERG	I	POWER EMERGENCY STOP (L≠3sec=STOP).
14	MJSW	I	MIC DETECTION INPUT. (L=MIC IN) (Pull up)
15	NC	I	Not used. (Connected to ground)
16	LPCSEL	I	“LPC ON/OFF (H=ON, NORMAL)”. (Pull up)
17	LOCK	O	GFS (FRAME SYNC) LOCK (NO USE=H). (Not connected)
18	DMUTE	O	DIGITAL DATA OUT MUTE.
19	SENS	I	DSP SENS1 FROM CD.
20	XCDRST	O	CD RESET.
21	DATA	O	DATA TO CD.
22	XLAT	O	XLT TO CD.
23	CLOK	O	CLK TO CD.
24	VSS	—	GND.
25	FOK	I	FOCUS OK.
26	SENS2	I	SSP SENS2 FROM CD.
27	XBUSY	I/O	READY/BUSY I/O TO HOST OD.
28	MPGON	O	MPEG POWER CONTROL OUTPUT. H=VCD
29	AC/DC	I	AC/DC DETECTION INPUT. H=AC
30	CDLID	I	CD LID SWITCH STATUS INPUT. H=OPEN (Pull up)
31	TST0	I/O	CHECK LAND.
32	TST1	I/O	
33	TST2	I/O	
34	TST3	I/O	
35	RESET	I	RESET.
36	HRDY	I	HRDY FROM CL680.
37	XHINT	I	XHINT FROM CL680.
38	RWSEL1	O	CD-RW SELECT1. L=CD-RW
39	SCOR	I/O	SCOR FROM CD.
40	VDD	—	5.0VDD.
41	XO	O	8.0MHz CERALOCK. (Pull down)

Pin No.	Pin Name	I/O	Description
42	XI	I	8.0MHz CERALOCK. (Pull down)
43	VSS	—	GND.
44	XT2	—	Not used.
45	XT1	I	5.0VDD.
46	AVSS	—	GND.
47	XMPGRST	O	MPEG BLOCK IC RESET.
48	HSEL	O	ADDRESS/DATA SEL TO CL680.
49	INLSW	I	INSIDE LIMIT SW.
50	RWSEL2	O	CD-RW SELECT1. L=CD-RW.
51	OSDXCS	O	OSD CHIP SELECT. (Pull down)
52	ABSEL	I	CXA1992A/B SELECT (L=CXA1992A).
53	CLVSEL	I	CLV MODE SELECT (H=CLV-N). (Not connected)
54	AADSEL	I	AUTO ADJUST SELECT (H=AUTO ON). (Not connected)
55	AVDD	—	5.0VDD.
56	AVREF	—	
57	HDOUT	I	HD-OUT FROM CL680.
58	HDIN	O	HD-IN FROM CL680.
59	HCK	O	HCK TO CL680.
60	OSDDATA	O	OSD DATA.
61	OSDCLK	O	OSD CLOCK.
62	COMMAND	I	COMMAND FROM HOST.
63	STATUS	O	STATUS TO HOST.
64	SCK	I	SCK FROM HOST.

IC, SM5878M

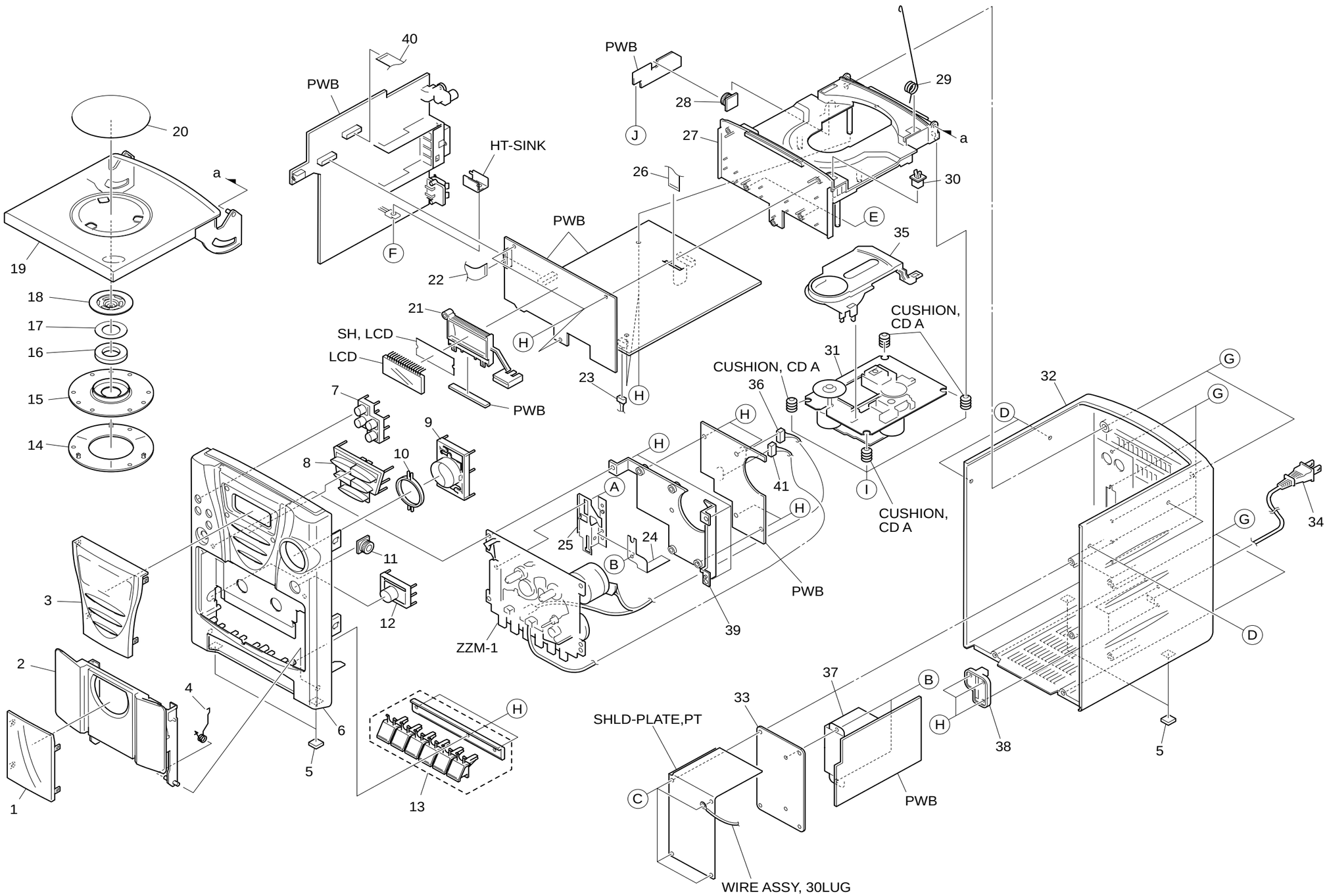
Pin No.	Pin Name	I/O	Description
1	MUTE	I	MODE = H: Soft mute ON/OFF terminal. (Mute at H). MODE = L: Attenuator level DOWN/UP terminal. (DOWN at H). (Pull down)
2	DEEM	I	De-emphasis ON/OFF terminal. (De-emphasis ON at H).
3	CKO	O	Oscillator clock output. (16.9344 MHz).
4	DVSS	—	Digital VSS terminal.
5	BCKI	I	Bit clock input terminal.
6	DI	I	Serial data input terminal.
7	DVDD	—	Digital VDD terminal.
8	LRCI	I	Sample rate clock (fs) input terminal. (H = L ch/L = R ch).
9	TSTN	I	Test input. (“H” or open during normal operation). (Not connected)
10	TO1	O	Test output 1. (Normally low level output). (Not connected)
11	AVDDL	—	Analog VDD terminal. (For L ch).
12	LO	O	Left channel analog output terminal.
13	AVSS	—	Analog VSS terminal.
14	RO	O	Right channel analog output terminal.
15	AVDDR	—	Analog VDD terminal. (For R ch).
16	MUTEO	O	Infinity zero detection output.
17	XVDD	—	X’tal system VDD terminal.
18	XTI	I	X’tal oscillator terminal. (Or external clock input terminal of 16.9344 MHz).
19	XTO	O	X’tal oscillator terminal.
20	XVSS	—	X’tal system VSS terminal.
21	DS	I	Double-speed/normal playback selection. (Double-speed at H). (Connected to ground)
22	RSTN	I	Reset terminal. (Reset at L).
23	MODE	I	Soft mute/Attenuator mode selection. (Soft mute at H). (Not connected)
24	ATCK	I	Attenuator level setup clock (Ignored when MODE = H). (Not connected)

IC, LC867140V-5T17

Pin No.	Pin Name	I/O	Description
1	O-XBUSY/CE	I/O	READY/BUSY I/O from VCD MICON. Tuner, chip enable output for PLL communication.
2	O-DATA	O	Tuner, serial data output for PLL communication. Sound processor control.
3	O-CLK	O	Tuner, clock output for PLL communication.
4	NC	—	No connected.
5	O-CLK SFT	O	Clock shift control.
6	I-HOLD	I	Hold status detection.
7	I-RST	I	Reset terminal.
8	XT1 (IN)	I	External crystal oscillator (32.768KHz) is connected to this pin (input) .
9	XT2 (OUT)	O	External crystal oscillator (32.768KHz) is connected to this pin (output) . (Pull down)
10	VSS1	—	GND.
11	CF1 (IN)	I	External ceramics oscillator (5.76MHz) is connected to this pin (input) .
12	CF2 (OUT)	O	External ceramics oscillator (5.76MHz) is connected to this pin (output) .
13	VDD1	—	Power supply positive polarity (+) terminal.
14	I-FM ST	I	Tuner stereo reception detection.
15	I-KEY0	I	Tact key, AD input detection.
16	I-CD SW	I	CD door detection.
17	I-KEY1	I	Tact key, AD input detection.
18	I-MOTOR	I	DECK PLAY detection.
19	P85	—	No connected.
20	P86	—	No connected.
21	I-TU DO	I	Tuner, serial data input for PLL communication.
22	O-BASS LED	O	No connected.
23	O-QS LED	O	No connected.
24	O-DUBB LED	O	No connected.
25	O-INT	I	Tuner destination, initial setting input.
26	NC	—	No connected.
27	NC	—	No connected.
28	I-REMO	I	Remote controller receptor signal input.
29-40	S0-11	O	LCD SEG terminal initial setting output. (No.1-12)
41	VDD3	—	Power supply positive polarity (+) terminal.
42	VSS3	—	GND.
43-51	S12-22	O	LCD SEG terminal initial setting output. (No.13-23)
52	S23	—	No connected.
53	S24	—	No connected.
54	S25	—	No connected.
55	O-CD LED	—	No connected.
56	O-TU LED	—	No connected.
57	O-TA LED	—	No connected.
58	O-ROCK LED	—	No connected.
59	O-POP LED	—	No connected.
60	O-JAZZ LED	—	No connected.

Pin No.	Pin Name	I/O	Description
61	NC	—	No connected.
62	I-CD TEST	—	No connected.
63	I-TU TEST	—	No connected.
64-66	COM0-2	O	LCD common output. (No.22-24)
67	NC	—	No connected.
68	VSS2	—	GND.
69	VDD2	—	Power supply positive polarity (+) terminal.
70	O-CD ON	O	CD/VCD power supply control.
71	O-TU ON	O	Tuner power supply control.
72	O-P. CONT	O	Main power control.
73	O-HI DUBB	O	No connected.
74	O-MUTE	O	Audio signal mute output.
75	O-FM MONO	O	No connected.
76	O-BEAT CONT	O	No connected.
77	O-QSOUND	O	No connected.
78	O-SD	O	COMMAND to VCD MICON.
79	I-SD	I	STATUS from VCD MICON.
80	O-SCLK	O	SCK to VCD MICON.

MECHANICAL EXPLODED VIEW 1/1



MECHANICAL PARTS LIST 1/1

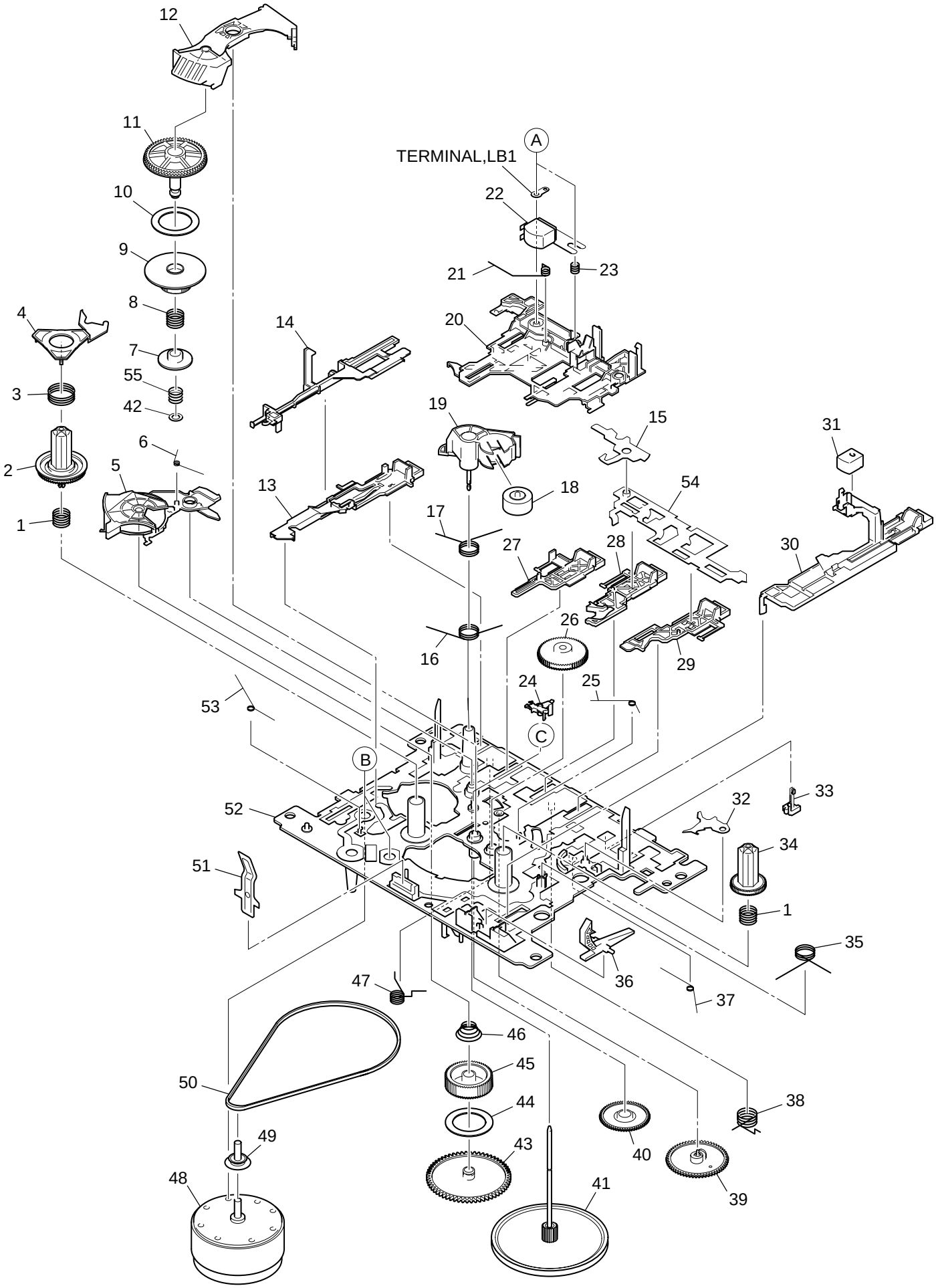
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CGD-007-010		WINDOW,CASS-V
2	8A-CLD-006-010		BOX,CASS
3	8A-CGD-008-010		WINDOW,LCD-V
4	8A-CLD-213-010		SPR-T,CASS
5	8A-CLD-216-010		CUSHION,FOOT
6	8A-CGD-001-010		CABI,FR-V
7	8A-CLD-011-010		BTN,FUNCTION
8	8A-CGD-010-010		BTN,CD-V
9	8A-CLD-010-010		BTN,VOL
10	8A-CGD-009-010		RING,VOL-V
11	87-063-164-010		OIL-DMPR 80
12	8A-CLD-013-010		BTN,EQ
13	8A-CLD-014-010		KEY,CASS
14	8Z-CT6-214-010		RING,CHUCK
15	8Z-CT6-213-010		BASE,CHUCK
16	87-036-368-010		MAGNET
17	86-CT9-222-010		PLATE,MAGNET
18	86-CT9-217-010		HLDR,CHUCK A(S)
19	8A-CGD-005-010		BOX,CD-V
20	8A-CGD-006-010		WINDOW,CD-V
21	8A-CLD-201-010		HLDR,LCD
22	8A-CLD-621-010		FF-CABLE,12P FR-MAIN
23	8A-CLD-622-010		CONN ASSY,2P DOOR
24	8A-CGD-202-010		SPR-P,REC-V
25	8A-CLD-210-010		PLATE,REC

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
26	8A-CLD-620-010		FF-CABLE,16P CD-RF
27	8A-CLD-003-110		CHAS,CD
28	87-063-165-010		OIL-DMPR 150
29	8A-CLD-212-010		SPR-T,CD
30	87-036-389-010		SW,PUSH LOCK
31	M8-ZZK-E90-070		DA11T3C
32	8A-CGD-003-010		CABI,REAR LH-V
33	8A-CLD-214-010		HLDR,PT
⚠ 34	87-A80-092-010		AC CORD ASSY,E BLK SUN FAI
35	8Z-CT9-064-010		PANEL CD
36	8A-CLD-625-010		CONN ASSY,4P TA-ME
⚠ 37	8A-CGD-620-010		PT,H
38	8A-CLD-202-010		HLDR,AC-CORD
39	8A-CGD-201-010		HLDR,CASS-PWB
40	8A-CGD-630-010		FF-CABLE,11P 1.25 DECK-MAIN
41	8A-CLD-626-010		CONN ASSY,4P RPH
A	8A-CDA-222-010		S-SCREW,CASS+2.6-4
B	87-067-566-010		TAPPING SCREW, VFTT+3-6
C	87-661-097-410		TAPPING SCREW, VFT1+3-12
D	87-B10-118-010		QT2+3-12 W/O NI
E	87-741-102-410		UT2+3-20
F	87-751-094-410		VT2+3-6 W10SL0T
G	87-B10-269-010		UT2+3-12 W/O CR
H	87-741-097-410		UT2+3-12
I	8A-CK4-223-010		S-SCREW,CD
J	87-661-095-410		VFT1+3-8

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue	GL	Light Green		

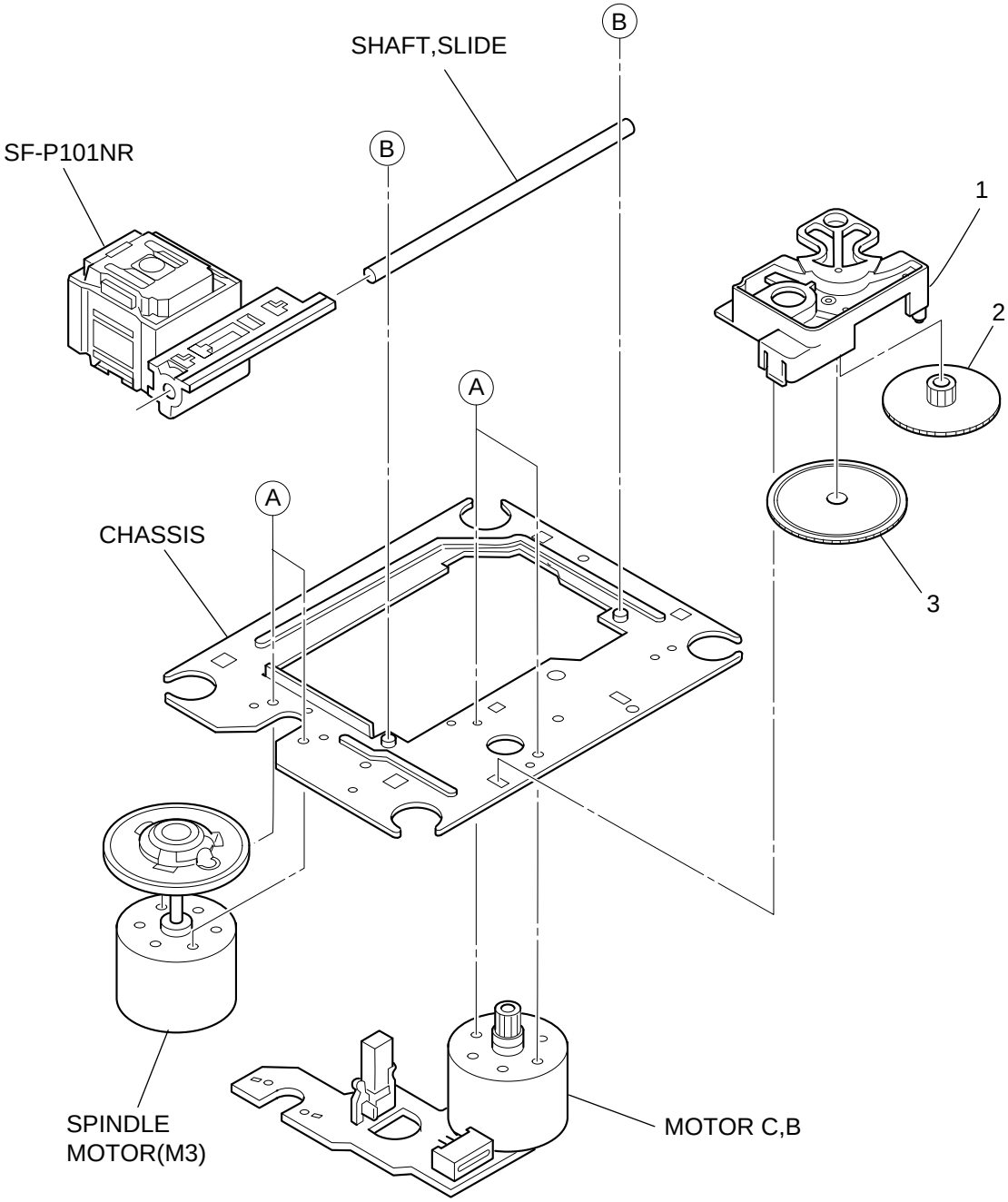
TAPE MECHANISM EXPLODED VIEW 1/1



TAPE MECHANISM PARTS LIST 1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-ZM1-254-310		SPR-C,REEL R
2	8Z-ZM1-225-110		GEAR,REEL R
3	8Z-ZM1-253-210		SPR-C,AUTO SENSOR
4	8Z-ZM1-217-110		LEVER,AUTO SENSOR
5	8Z-ZM1-212-110		LEVER,T-UP
6	8Z-ZM1-245-310		SPR-T,AUTO
7	8Z-ZM1-236-010		CLR,SLIP FF/REW
8	8Z-ZM1-252-110		SPR-C,FF/REW
9	8Z-ZM1-230-010		GEAR,SLIP FF/REW A
10	8Z-ZM1-269-010		FELT,FF/REW 2
11	8Z-ZM1-238-110		GEAR,SLIP FF/REW B 2
12	8Z-ZM1-237-110		LEVER,FF/REW 2
13	8Z-ZM1-283-010		LEVER,PAUSE 2
14	8Z-ZM1-222-010		LEVER,E-LOCK M
15	8Z-ZM1-219-010		LEVER,E-OPEN
16	8Z-ZM1-244-110		SPR-T,T-UP
17	8Z-ZM1-247-310		SPR-T,PINCH
18	8Z-ZM1-261-110		ROLLER ASSY,PINCH
19	8Z-ZM1-221-210		LEVER,PINCH
20	8Z-ZM1-205-310		LEVER,PLAY
21	8Z-ZM1-248-210		SPR-T,BRG
22	87-A91-830-010		HEAD,RP-7442
23	84-ZM2-227-310		SPR-C,AZIMUTH
24	8Z-ZM1-216-110		LEVER,AUTO
25	8Z-ZM1-246-110		SPR-T,AUTO 2
26	8Z-ZM1-233-110		GEAR,IDL REW
27	8Z-ZM1-208-010		LEVER,STOP
28	8Z-ZM1-207-010		LEVER,FF
29	8Z-ZM1-206-010		LEVER,REW
30	8Z-ZM1-211-210		LEVER,REC 2
31	87-A91-819-010		HEAD,EH 2NSS-2200
32	8Z-ZM1-215-010		LEVER,REC LOCK
33	87-A91-492-010		SW,LEAF MSW18560
34	8Z-ZM1-226-010		GEAR,REEL L
35	8Z-ZM1-241-210		SPR-T,PLAY
36	8Z-ZM1-220-110		LEVER,REC SENSOR
37	8Z-ZM1-249-210		SPR-T,FR
38	8Z-ZM1-242-310		SPR-T,FF/REW
39	8Z-ZM3-244-010		GEAR,CAM TD20
40	8Z-ZM1-232-010		GEAR,IDL FF/REW
41	82-ZM1-290-010		FLY-WHL ASSY,ZZM1
42	8Z-ZM1-275-010		W-L,1.47-4-0.25
43	8Z-ZM1-228-010		GEAR,SLIP T-UP B
44	8Z-ZM1-265-010		FELT,T-UP
45	8Z-ZM1-227-010		GEAR,SLIP T-UP A
46	8Z-ZM1-251-210		SPR-C,T-UP SLIP
47	8Z-ZM1-243-310		SPR-T,STOP/PAUSE
48	87-A91-825-010		MOT,M09Y/Z
49	8Z-ZM1-271-010		PULLEY,MOT ZZM-1
50	8Z-ZM1-264-010		BELT,MAIN S
51	8Z-ZM1-260-010		SPR-P,CASETTE
52	8Z-ZM1-201-610		CHAS ASSY,ZZM-1
53	8Z-ZM1-255-310		SPR-T,E-LOCK
54	8Z-ZM1-214-210		LEVER,LOCK
55	8Z-ZM1-257-110		SPR-C,F/R
A	84-ZM2-242-010		S-SCREW,AZ1-2-6.4
B	8Z-ZM1-270-110		V+2.6 ZZM-1
C	87-B10-301-010		W-L,1.63-3.2-0.5 SLIT

CD MECHANISM EXPLODED VIEW 1/1



CD MECHANISM PARTS LIST 1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S2-121-A28-400		COVER GEAR
2	S2-511-A21-000		GEAR MIDDLE
3	S2-511-A21-100		GEAR,DRIVE
A	S1-PN2-03R-OSE		SCR PAN PCS 2-3
B	87-261-073-410		SCR S-TPG FLT 2.6-6
ALL	M8-ZZK-E90-070		DA11T3C

SPEAKER PARTS LIST 1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CLD-635-010		SPKR,10MM 7OHM 8W Y000411
2	8A-CGD-012-010		FRAME,NET-V ASSY
3	8A-CLD-021-010		CABI,SPKR-FR
4	8A-CLD-026-010		PLATE,GATE
5	8A-CLD-216-010		CUSHION,FOOT
A	87-741-096-410		UT2+3-10
B	87-741-104-410		UT2+3-30 GLD

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